PB89-208169

RCRA (Resource Conservation and Recovery Act) Inspection Manual

(U.S.) Environmental Protection Agency, Washington, DC

22 Apr 88

U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Office of
Waste Programs
Enforcement

OSWER 9938.2A
March, 1988

EPA

RCRA Inspection Manual

50272-101

REPORT DOCUMENTATION PAGE

1. REPORT NO. EPA/OWPE-88/001

2.

3. PB89-208169

4. Title and Subtitle

RCRA Inspection Manual

5. Report Date

April 22, 1988

6.

7. Author(s)

8. Performing Organization Rept. No.

OSWER 9938.2A

9. Performing Organization Name and Address

U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response/OWPE
Washington, D.C. 20460

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.

(C)

(G)

12. Sponsoring Organization Name and Address

U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response/OWPE
Washington, D.C. 20460

13. Type of Report & Period Covered

Final

14.

15. Supplementary Notes

Supercedes RCRA Inspection Manual of 1981. Includes June 1989 update.

RCRA is acronym for Resource Conservation and Recovery Act

16. Abstract (Limit: 200 words)

The RCRA Inspection Manual is intended to assist RCRA field inspectors in their performance of Compliance Evaluation Inspections of RCRA generators, transporters, and treatment, storage, and disposal facilities. Included in the document are inspection procedures for both interim status and permitted facilities. The guidance also provides inspection checklists to aid the inspectors in their review of facility compliance.

The Manual will assist RCRA inspectors and enforcement personnel to:

- conduct RCRA inspections efficiently and professionally to determine facility compliance with RCRA regulations,
- adequately prepare for and conduct inspections at RCRA generators, transporters, and TSD's
- review facility permits for inspection of permitted facilities, and
- prepare quality inspection reports.

17. Document Analysis a. Descriptors

b. Identifiers/Open-Ended Terms

Resource Conservation and Recorvery Act (RCRA), Inspection, Enforcement, Compliance, Hazardous Waste, Permits

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

c. COSATI Field/Group

Availability Statement

No restriction on distribution.
Available from NTIS, Springfield, VA 22161

19. Security Class (This Report) Unclassified

20. Security Class (This Page) Unclassified

21. No. of Pages 376

22. Price

(See ANSI-Z39.18)

See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

Forward

The RCRA Inspection Manual has been developed for the exclusive use of inspection personnel in conducting field inspections of RCRA-regulated facilities under US EPA or State program authorities. The overall goal of this document is to provide useful procedural and technical information to determine facility compliance with RCRA standards. Specific objectives are as follows:

- To provide a detailed overview of the elements of RCRA Compliance Evaluation Inspections (CEI's).
- To describe the scope of inspector authorities and responsibilities.
- To provide detailed standard procedures for performing RCRA inspections.
- To provide general inspection information that is both comprehensive in scope and complements more detailed guidance on inspecting particular types of hazardous waste facilities.
- To provide a manual that could serve as the basis for general training of new inspection personnel on RCRA inspection procedures.

Table of Contents

SECTION **PAGE**

FORWARD i

1.0 INTRODUCTION

1.1 BACKGROUND 1-3

The RCRA Program 1-3
Federal RCRA Standards 1-4
State Authorization in the RCRA Program 1-5

1.2 ROLE OF INSPECTIONS IN THE ENFORCEMENT PROGRAM 1-7

1.3 TYPES OF INSPECTIONS 1-9

1.4 ENFORCEMENT PRIORITIES 1-11

1.5 AUTHORITY AND LIMITATIONS OF THE INSPECTOR 1-13

Confidential Business Information Access Authorization 1-17

1.6 WORK ETHICS 1-19

Conflicts of Interest 1-19
Public Relations 1-20
Gifts, Gratuities, Favors, Luncheons, Etc. 1-20
Attempted Bribery 1-20

2.0 PREPARING FOR THE INSPECTION

2.1 PURPOSE AND OBJECTIVES OF INSPECTION PREPARATION 2-3

SECTION PAGE

2.2 DEFINING THE SCOPE OF THE INSPECTION 2-5

2.3 COORDINATING THE INSPECTION 2-7

- Permitted Facilities 2-8
- Enforcement Actions 2-9

2.4 DEVELOPING AND REVIEWING THE FACILITY FILE 2-11

2.5 REVIEWING APPLICABLE REGULATIONS AND ENFORCEMENT DOCUMENTS 2-15

2.6 DEVELOPING FACILITY-SPECIFIC INSPECTION PLANS AND CHECKLISTS 2-17

- Notifying the Facility 2-18
- Determining Health and Safety Requirements 2-19

2.7 IDENTIFYING INSPECTION EQUIPMENT 2-21

2.8 COMPLETING THE PRE-INSPECTION WORKSHEET 2-29

3.0 PROCEDURE FOR DEVELOPING PERMIT-SPECIFIC TSDF INSPECTION PLANS

3.1 INTRODUCTION 3-3

- Alternative Approaches 3-4
- Assembling Pertinent Materials 3-5

3.2 METHODOLOGY FOR DEVELOPING INFORMATION SHEETS AND INSPECTION CHECKLISTS 3-7

3.3 DEVELOPING AN INSPECTION PROTOCOL 3-9

- Site Orientation 3-10
- Release Points 3-24
- Other Conditions 3-27

4.0 CONDUCTING THE INSPECTION

4.1 FACILITY ENTRY 4-3

- Arrival 4-3
- Consent 4-4
- Denied Access 4-5
- Use of a Warrant to Gain Access 4-6

SECTION PAGE

4.1 FACILITY ENTRY (continued)

Conducting an Inspection Under a Warrant 4-8
Dealing with Threats 4-8

4.2 OPENING DISCUSSION WITH OWNER/OPERATOR 4-9

4.3 OPERATIONS, WASTE HANDLING, AND RECORD REVIEW 4-13

Generators, Transporters, and Interim Status TSDFs 4-14
Permitted Facilities 4-19

4.4 GENERAL PROCEDURES 4-21

Use of Inspection Checklists 4-23
Determining the Need for Sampling and Identifying Sampling Points 4-23
Observations for Follow-up Case Development 4-25

4.5 DOCUMENTATION 4-27

Field Notebook 4-27
Checklists 4-28
Photographs 4-28
Maps and Drawings 4-29

4.6 CLOSING DISCUSSION WITH OWNER/OPERATOR 4-31

5.0 PREPARING THE INSPECTION REPORTS

5.1 REPORT PREPARATION 5-3

Objectives 5-3
Report Preparation Procedures 5-4

5.2 REPORT ELEMENTS 5-7

Checklists 5-7
Narrative Information 5-7
Documentary Support 5-8

5.3 FOLLOW-UP DISCUSSIONS AND FILE PREPARATION 5-13

Preparing Inspection Files 5-14

SECTION PAGE

5.4 DISCLOSURE OF OFFICIAL INFORMATION 5-17

Requests for Information 5-17
Confidential Business Information 5-18

APPENDIX I: KEEPING UP WITH RCRA I-1

APPENDIX II: GLOSSARY II-1

APPENDIX III: REGULATORY REQUIREMENT SYNOPSIS AND INSPECTION PROCEDURES

Introduction III-2
TABLE III-1 Part 262 - Generators III-3
TABLE III-2 Part 263 - Transporters III-28
TABLE III-3 Part 265 - Interim Status Facilities III-40
TABLE III-4 Part 264 - Permitted Facilities III-118
TABLE III-5 Part 266 - Specific Hazardous Wastes III-156
TABLE III-6 Part 268 - Land Disposal Restrictions III-170

APPENDIX IV: INSPECTION CHECKLISTS

Exhibit IV-1. General Inspection Information Form IV-1
Exhibit IV-2. General Facility Checklist IV-2
Exhibit IV-3. Land Disposal Restrictions Checklist IV-8
Exhibit IV-4. Generators Checklist IV-10
Exhibit IV-5. Transporters Checklist IV-15
Exhibit IV-6. Containers Checklist IV-18
Exhibit IV-7. Surface Impoundments Checklist IV-20
Exhibit IV-8. Waste Piles Checklist IV-24
Exhibit IV-9. Land Treatment Checklist IV-27
Exhibit IV-10. Landfills Checklist IV-33
Exhibit IV-11. Incinerators Checklist IV-37
Exhibit IV-12. Thermal Treatment Checklist IV-40
Exhibit IV-13. Ground-Water Monitoring Checklist IV-43
Exhibit IV-14. Waste Information Sheet IV-50

APPENDIX V: HEALTH AND SAFETY CONSIDERATIONS V-1

Chapter One

Introduction

SECTION **PAGE**

1.1 BACKGROUND 1-3

- The RCRA Program 1-3
- Federal RCRA Standards 1-4
- State Authorization in the RCRA Program 1-5

1.2 ROLE OF INSPECTIONS IN THE ENFORCEMENT PROGRAM 1-7

1.3 TYPES OF INSPECTIONS 1-9

1.4 ENFORCEMENT PRIORITIES 1-11

1.5 AUTHORITY AND LIMITATIONS OF THE INSPECTOR 1-13

- Confidential Business Information Access Authorization 1-17

1.6 WORK ETHICS 1-19

- Conflicts of Interest 1-19
- Public Relations 1-20
- Gifts, Gratuities, Favors, Luncheons, Etc. 1-20
- Attempted Bribery 1-20

1.1

Background

The primary purpose of this manual is to provide procedural and technical guidance for performing inspections of facilities regulated by the Resource Conservation and Recovery Act (RCRA). The main text of the document provides pre-inspection, inspection and post-inspection procedures for performing RCRA inspections. The appendices provide technical guidance on evaluating compliance with specific RCRA standards, inspection checklists, and other technical information useful in performing inspections.

The procedures provided have been developed for performing Compliance Evaluation Inspections (CEI's) at hazardous waste generators, transporters, and treatment, storage and disposal facilities (TSDF's).

However, these procedures are broadly applicable to performing other types of RCRA inspections (which are discussed in Section 1.3). The procedures are general and are not intended to be prescriptive, in deference to Regional and State differences in approaches and procedures. Inspectors using this handbook should be aware of and follow additional Regional or State guidance supplementing the information provided herein.

The RCRA Program

The Resource Conservation and Recovery Act of 1976 (RCRA) is the primary statute governing the regulation of solid and hazardous waste. RCRA completely replaced the Solid Waste Disposal Act of 1965 and supplemented the Resource Recovery Act of 1970; RCRA itself was substantially amended by the Hazardous and Solid Waste Amendments of 1984.

The principal objectives of RCRA, as amended, are to:

- Promote the protection of human health and the environment from potential adverse effects of improper solid and hazardous waste management.
- Conserve material and energy resources through waste recycling and recovery.

Preceding page blank

- Reduce or eliminate the generation of hazardous waste as expeditiously as possible.

To achieve these objectives, RCRA authorizes EPA to regulate the generation, treatment, storage, transportation, and disposal of hazardous wastes.[1] The structure of the national hazardous waste regulatory program envisioned by Congress is laid out in Subtitle C of the Act (Sections 3001 through 3019), which provide EPA with specific authorities with respect to:

- Promulgating standards governing hazardous waste generation and management.
- Promulgating standards for permitting hazardous waste treatment, storage, and disposal facilities.
- Inspecting hazardous waste management facilities.
- Enforcing RCRA standards.
- Authorizing States to manage the RCRA Subtitle C program, in whole or in part, within their respective borders, subject to EPA oversight.

Federal RCRA Standards

Federal RCRA hazardous waste regulations are promulgated in 40 CFR Parts 260 through 272. The core of the RCRA regulations establish the "cradle to grave" hazardous waste regulatory program through seven major sets of regulations:

- Identification and listing of hazardous wastes that are to be regulated (40 CFR Part 261).
- Standards for generators of hazardous waste (40 CFR Part 262).
- Standards for transporters of hazardous waste (40 CFR Part 263).
- Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities, (40 CFR Parts 264, 265,and 267).
- Standards for the management of specific hazardous wastes and specific types of hazardous waste management facilities (40 CFR Part 266).
- Land disposal restriction standards (40 CFR Part 268).
- Requirements for the issuance of permits to hazardous waste facilities (40 CFR Parts 270).

---

[1] The Act also provides EPA with authority to regulate solid waste and underground storage tanks. Programs established under these authorities are not within the scope of this document.

- Guidelines for authorizing State hazardous waste programs to be operated in lieu of the Federal program (40 CFR Part 271).

The first group of Federal RCRA standards were promulgated in May 1980. Additional standards have been added periodically since that time to complete the scope of the initial program mandated in RCRA, respond to new statutory initiatives, and improve upon the original program. Appendix I discusses keeping up with changes in the RCRA standards and sources of regulatory information.

State Authorization in the RCRA Program

Under Section 3006 of RCRA, EPA may authorize States to administer and enforce a State hazardous waste program, in lieu of the Federal Subtitle C program, within their respective jurisdictions. In order to receive authorization State programs must:

- Be equivalent to the Federal Subtitle C program.
- Be consistent with the Federal and State programs authorized in other States.
- Provide adequate enforcement of compliance with Subtitle C requirements.

In practical terms, these requirements mean that, to be authorized, State hazardous waste regulations must be at least as stringent as Federal Subtitle C standards; State regulations and programs must follow generally the same approach as Federal and other State regulations and programs; and State enforcement penalties and activities must be at least equivalent to penalties provided in RCRA and enforcement activities performed by EPA.

States have generally received authorization incrementally, due to the incremental implementation of the Federal RCRA program (e.g., the ongoing development of regulations governing new waste management units and practices) and the unavoidable lag between Federal promulgation of Subtitle C standards and development and adoption of equivalent standards by the States. Thus, States may be authorized to administer and enforce the program covering certain types of waste management units and practices within the State and may not be authorized for other types of units. For example, a State may be authorized to manage the program for hazardous waste generators and storage and treatment facilities, but may not be authorized for incinerators and land disposal facilities. As a result, some facilities in a State may be subject to State enforcement, and others subject to Federal enforcement through the EPA Regional offices. Facilities with several types of units may be subject to joint Federal/State enforcement.

In general, where a facility is subject to joint Federal/State authority, inspections may be conducted by both Federal EPA and State inspectors. These inspections may be conducted jointly or separately. When conducted jointly, Federal and State inspectors should focus their inspection efforts on the units subject to their respective jurisdictions. When conducted separately, Federal or State inspectors may inspect units which are not under their jurisdiction and identify non-complying conditions. These conditions should then be reported to the agency with jurisdiction over the unit(s) for further action.

1.2

Role of Inspections In The Enforcement Program

The RCRA Enforcement Program encompasses both administrative and inspection systems whose purpose is to assure that hazardous waste handlers are properly complying with RCRA regulations. The Compliance Evaluation Inspection (CEI) is the primary enforcement mechanism for detecting and verifying RCRA violations. Inspections conducted under the enforcement program are initiated either for neutral, administrative purposes, or "for cause" (i.e., where probable violations of the Act have been observed or brought to the attention of EPA through, for example, an employee's complaint). Depending on the circumstances, EPA Headquarters, EPA Regional offices, or authorized agencies select facilities for inspection.

A CEI serves two critical enforcement functions:

- Determining compliance with RCRA regulations, permit provisions or pre-existing enforcement orders; and
- Supporting enforcement actions.

Therefore, it is imperative that inspections be performed in a manner which is both technically and legally correct. Flaws in either the technical or legal conduct of an inspection may hamper, prevent, or invalidate the use of inspection results for these critical functions. Thus, two overriding criteria must guide the conduct of inspections to insure that inspections optimally fulfill their role in RCRA enforcement:

- Technical accuracy and integrity. Inspections must be technically correct. Any measurement or other data collection and analysis must be thorough, technically proper, and appropriately documented.

- Legal propriety. Legal requirements concerning the conduct of inspections must be scrupulously followed.

Adherence to both of these criteria is vital not only to the success of an inspection but also to the use of inspection results and, ultimately, to the proper functioning of the RCRA enforcement program.

Evidence obtained during an inspection may result in the Agency taking any of the following actions:

- Issuance of a warning letter
- Issuance of an administrative order
- Assessment of an administrative civil penalty
- Commencement of a permit action
- Institution of a civil court action
- Institution of a criminal court investigation.

1.3

Types of Inspections

Compliance Evaluation Inspections are one of several types of inspections performed under the RCRA program. Types of inspections differ based upon differences in purpose, in facility status, and in the probable use of results. The Office of Waste Programs Enforcement has developed, and is continuing to develop, specific guidance on performing the different types of inspections.

The different types of RCRA inspections are:

- Compliance Evaluation Inspections (CEI's) - routine inspections of hazardous waste generators, transporters, and treatment, storage, and disposal facilities to evaluate facility compliance with applicable RCRA standards promulgated in 40 CFR 262, 263, 264, 265, 266, 267, and 268.
- Case Development Inspections (CDI's) - inspections conducted when RCRA violations are suspected or revealed during a CEI for the specific purpose of gathering data in support of an enforcement action.
- Comprehensive Ground-Water Monitoring Evaluations (CME's) - detailed evaluations of the adequacy of the design and operation of ground-water monitoring systems at RCRA facilities.
- Operation and Maintenance Inspections (O&M) - inspections of land disposal facilities to determine the adequacy of the operation and maintenance of ground-water monitoring systems at RCRA facilities.
- Lab Audits - inspections of laboratories performing groundwater monitoring analyses to determine if proper sample handling and analysis protocols are used.
- State Oversight Inspections - inspections conducted by US EPA personnel to determine the effectiveness of a State hazardous waste management program and to determine facility compliance.

- RCRA Facility Assessment (RFA) - an assessment performed at a TSDF to identify releases or potential releases of hazardous constituents from solid waste management units (SWMUs) that may require corrective action. RFAs are usually conducted as part of the permitting process.

The Office of Waste Programs Enforcement has developed or plans to develop the following guidance for performing the types of inspections described above. Note that final titles are not available for planned documents, and therefore descriptive titles which are subject to change have been used:

- Compliance Evaluation Inspections:
    - The RCRA Inspection Manual
    - Inspection Manual - RCRA Land Disposal Restrictions Rule for F001-F005 (Solvent) Wastes, OSWER Dir. No. 9938.1, April 1987.
    - Inspection Manual for Hazardous Waste Storage and Treatment Tank Systems (in preparation)
    - Inspection manual on retrofitting surface impoundments (planned)
    - Inspection manual for incinerators (planned)
- Case Development Inspections:
    - Technical Case Development Guidance Document (in preparation)
- Compliance Monitoring Evaluations:
    - RCRA Ground Water Monitoring Technical Enforcement Guidance Document, OSWER Dir. No. 9950.1, September 1986.
    - Comprehensive Groundwater Monitoring Evaluation Guidance Document, OSWER Dir. No. 9950.2, December 1986.
- Operation and Maintenance Inspection:
    - Operation and Maintenance Inspections for Ground-Water Monitoring (RCRA Ground-Water Monitoring Systems), OSWER Dir. No. 9950.3, March 1988.
- Lab Audits:
    - Inspection manual for laboratory audits (in preparation).
- RCRA State Oversight Inspection Guide, OSWER Dir. No. 9946.1, December 1987.

1.4

Enforcement Priorities

RCRA enforcement managers at EPA Headquarters, Regional offices, and State agencies establish priorities for inspecting RCRA regulated facilities in order to optimize, to the extent possible, the use of limited personnel and material resources to achieve enforcement objectives. Generally, priorities are established annually in the "RCRA Implementation Plan" (RIP) (although they may change during the year in response to new initiatives) and may be based on several factors, including:

- Magnitude of the threat to human health and the environment posed by specific facilities or types of facilities (e.g., a specific land disposal facility known to pose a hazard to human health and the environment based on past inspections, or land disposal facilities versus storage facilities in general).
- Promulgation of new standards governing specific types of facilities or waste management activities (e.g., promulgation of the land disposal restrictions regulations).
- Statutory requirements for inspecting particular types of facilities by or within a given year, or annually/biannually.
- Expansion of the regulatory program to cover new types of facilities (e.g., expansion to cover waste oil recyclers).
- Progression of the RCRA regulatory and enforcement program to new stages of implementation or development (e.g., from CMEs to O&M inspections).

It is important for inspectors both to know current enforcement priorities and develop the specific skills necessary to perform the inspections required under those priorities. They also need to be aware of changes in priorities and to maintain flexible skills in order to readily accommodate such changes. Frequently, inspectors are assigned to concentrate on inspections of a particular type of facility or waste management practice in accordance with contemporary program priorities. As a result, inspectors will develop specialized skills in inspecting that type of facility or practice through training, research and experience. However, it is important that inspectors also maintain a good general knowledge of the overall RCRA program so that they can flexibly respond to new enforcement priorities or changes in assignment which require them to inspect other types of facilities and practices. To do so, inspectors should:

- Review major new regulations (including preambles) as they are promulgated.
- Be familiar with new and existing guidance on inspecting other types of facilities and practices.
- Be aware of new and existing technical guidance (e.g., permit writers guidance) that could provide quick background information on other types of facilities and practices.

Inspectors should also be ready to provide input to enforcement program managers planning initiatives that are within the inspectors' areas of expertise. In such instances, inspectors may be able to expedite information collection or point out technical difficulties or issues which should be considered in the planning stage.

1.5

Authorities and Limitations of the Inspector

Inspectors are skilled field professionals who represent regulating agencies in dealing with industry and the public. Inspectors are responsible for conducting inspections in a professional manner that reflects credit on themselves and on the agency that they represent. Their primary responsibility is to determine facility compliance with RCRA requirements.

Inspection authorities are detailed in Section 3007 of the Act. Specifically, the Act provides authority to conduct compliance and evaluation inspections of hazardous waste management facilities for the purpose of developing regulations, preparing permits, or ensuring compliance with the provisions or regulations promulgated under the Act. Access to such facilities is granted to "duly designated" officers, employees, or representatives of the U.S. Environmental Protection Agency (EPA), and to officers, employees, or representatives of s with authorized hazardous waste programs. Inspectors are permitted to have access to, and to copy all records at hazardous waste management facilities at all reasonable times. Section 3007 also outlines the scope of RCRA inspections and authorizes inspectors to conduct sampling (when deemed necessary), and to note compliance with recordkeeping and labeling requirements. In addition, Section 3007 provides guidelines governing inspections; i.e., the procedures the inspector must follow with regard to pre-inspection, inspection, and post-inspection activities.

In summary, Section 3007 provides the authority to conduct inspections and specifies certain guidelines which should direct the conduct of an inspection. It is essential that all inspectors be familiar with this section or comparable State authority. It is presented in Exhibit 1-1 in its entirety.

EXHIBIT 1-1. RCRA SECTION 3007, AS AMENDED BY THE SOLID WASTE DISPOSAL ACT OF 1980 AND THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

"INSPECTIONS

"SEC. 3007. (a) ACCESS ENTRY.—For purposes of developing or assisting in the development of any regulation or enforcing the provisions of this title, any person who generates, stores, treats, transports, disposes of, or otherwise handles *or has handled* hazardous wastes shall, upon request of *any officer, employee or representative* of the Environmental Protection Agency, duly designated by the Administrator, or upon request of any duly designated *officer, employee or representative* of a State having an authorized hazardous waste program, *furnish information relating to such wastes and permit* such person at all reasonable times to have access to, and to copy all records relating to such wastes. For the purposes of developing or assisting in the development of any regulation or enforcing the provisions of this title, *such officers, employees or representatives* are authorized—

"(1) to enter at reasonable times any establishment or other place where hazardous wastes are *or have been* generated, stored, treated, ***disposed of, or transported from***;

"(2) to inspect and obtain samples from any person of any such wastes and samples of any containers or labeling for such wastes. Each such inspection shall be commenced and completed with reasonable promptness. If the *officer, employee or representative obtains* any samples, prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the sample obtained and if requested a portion of each such sample equal in volume or weight to the portion retained. If any analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge.

"(b) AVAILABILITY TO PUBLIC. *(1)* Any records, reports, or information obtained from any person under this section shall be available to the public, except that upon a showing satisfactory to the Administrator (or the State, as the case may be) by any person that records, reports, or information, or particular part thereof, to which the Administrator (or the State, as the case may be) *or any officer, employee or representative thereof* has access under this section if made public, would divulge information entitled to protection under section 1905 of title 18 of the United States Code, *such information or particular portion thereof shall be considered* confidential in accordance with the purposes of that section, except that such record, report, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this Act, or when relevant in any proceeding under this Act.

"(2) Any person not subject to the provisions of section 1905 of title 18 of the United States Code who knowingly and willfully divulges or discloses any information entitled to protection under this subsection shall, upon conviction, be subject to a fine of not more than $5,000 or to imprisonment not to exceed one year, or both.

"(3) In submitting data under this Act, a person required to provide such data may—

"(A) designate the data which such person believes is entitled to protection under this subsection, and

"(B) submit such designated data separately from other data submitted under this Act.

A designation under this paragraph shall be made in writing and in such manner as the Administrator may prescribe.

EXHIBIT 1-1. (CONTINUED)

"(4) Notwithstanding any limitation contained in this section or any other provision of law, all information reported to, or otherwise obtained by, the Administrator (or any representative of the Administrator) under this Act shall be made available, upon written request of any duly authorized committee of the Congress, to such committee (including records, reports, or information obtained by representatives of the Environmental Protection Agency).

FEDERAL FACILITIES

SEC. 229. Section 3007 of the Solid Waste Disposal Act is amended by adding the following new subsection after subsection (b) thereof:

"(c) FEDERAL FACILITY INSPECTIONS.—Beginning twelve months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984, the Administrator shall, or in the case of a State with an authorized hazardous waste program the State may, undertake on an annual basis a thorough inspection of each facility for the treatment, storage, or disposal of hazardous waste which is owned or operated by a Federal agency to enforce its compliance with this subtitle and the regulations promulgated thereunder. The records of such inspections shall be available to the public as provided in subsection (b).".

STATE-OPERATED FACILITIES

SEC. 230. Section 3007 of the Solid Waste Disposal Act is amended by adding the following new subsection after subsection (c):

"(d) STATE-OPERATED FACILITIES.—The Administrator shall annually undertake a thorough inspection of every facility for the treatment, storage, or disposal of hazardous waste which is operated by a State or local government for which a permit is required under section 3005 of this title. The records of such inspection shall be available to the public as provided in subsection (b).".

MANDATORY INSPECTIONS

SEC. 231. Section 3007 of the Solid Waste Disposal Act is amended by inserting the following new subsection after subsection (d) thereof:

"(e) MANDATORY INSPECTIONS.—(1) The Administrator (or the State in the case of a State having an authorized hazardous waste program under this subtitle) shall commence a program to thoroughly inspect every facility for the treatment, storage, or disposal of hazardous waste for which a permit is required under section 3005 no less often than every two years as to its compliance with this subtitle (and the regulations promulgated under this subtitle). Such inspections shall commence not later than twelve months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984. The Administrator shall, after notice and opportunity for public comment, promulgate regulations governing the minimum frequency and manner of such inspections, including the manner in which records of such inspections shall be maintained and the manner in which reports of such inspections shall be filed. The Administrator may distinguish between classes and categories of facilities commensurate with the risks posed by each class or category.

EXHIBIT 1-1. (CONTINUED)

"(2) Not later than six months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984, the Administrator shall submit to the Congress a report on the potential for inspections of hazardous waste treatment, storage, or disposal facilities by nongovernmental inspectors as a supplement to inspections conducted by officers, employees, or representatives of the Environmental Protection Agency or States having authorized hazardous waste programs or operating under a cooperative agreement with the Administrator. Such report shall be prepared in cooperation with the States, insurance companies offering environmental impairment insurance, independent companies providing inspection services, and other such groups as appropriate. Such report shall contain recommendations on provisions and requirements for a program of private inspections to supplement governmental inspections."

The authority to conduct inspections under the auspices of RCRA is specifically stated in Section 3007(a) of the Act as being granted to the EPA Administrator and any State having an authorized hazardous waste program. Officers, employees, or representatives of the EPA and the above-mentioned s that are duly designated by the Administrator and the States, respectively, are authorized to:

- o Enter at reasonable times any establishment or other place where hazardous wastes are, or have been, generated, stored, treated, disposed of, or transported from.
- o Obtain from any person samples for the inspection of any such wastes as well as samples of any containers or labelling for such wastes.

Inspections must be conducted in a prescribed manner, which includes the following:

- o Presenting EPA or State identification.
- o Entering the establishment at a reasonable time and completing the inspection as promptly as possible.
- o Issuing a receipt for any samples obtained.
- o Providing a duplicate sample (split sample) if requested.
- o Furnishing a copy of any sample analysis, if conducted, to the owner, operator, or agent in charge.

Although compliance inspections may result in enforcement actions, they generally will not involve the need to inform individuals of their rights under the Fifth Amendment of the United s Constitution. (e.g., to provide them with a "Miranda" warning) The Fifth Amendment provides that "No person shall be compelled in any criminal case to be a witness against himself." Issues concerning this right arise whenever a person is taken into custody or otherwise has his or her freedom restricted by law enforcement officers.

Because inspections under RCRA are generally not conducted by law enforcement officers and do not involve custodial situations, Fifth Amendment rights normally are not implicated.

Confidential Business Information Access Authorization

An inspector who conducts RCRA inspections will probably encounter confidential business information (CBI) at some time or another. Inasmuch as this information may only be viewed by individuals who have been cleared for access, all inspectors should have CBI access authorization. This authorization is granted by either the EPA's Deputy Administrator for General Enforcement or the duly designated State-level representative in the case of a State-run hazardous waste program.

1.6

Work Ethics

Inspection personnel are expected to perform their duties in a professional and responsible manner. Personnel shall:

- Develop and report the facts of an investigation completely, accurately, and objectively.
- Conduct themselves at all times in accordance with the regulations in the EPA handbook, Responsibilities and Conduct for EPA Employees.
- Avoid, in the course of an investigation, any act or failure to act which could be considered motivated by reason of personal or private gain.
- Make a continuing effort to improve their professional knowledge and technical skill in conducting hazardous waste inspections.

Conflicts of Interest

A conflict of interest may exist whenever an inspector has a personal or private interest in a matter which is related to his or her official duties and responsibilities. It is important to avoid even the appearance of a conflict of interest because the appearance of a conflict damages the integrity of the EPA or State agency and their employees in the eyes of the public. All employees must, therefore, be constantly aware of situations which are, or give the appearance of being, conflicts of interest when dealing with others inside or outside of government. For a detailed discussion of the situations and/or activities which may result in conflict of interest, personnel are directed to the publication, Responsibilities and Conduct for EPA Employees, which can also be found in the Federal Register (38 FR No. 73), April 17, 1973.

Preceding page blank

Public Relations

It is important that cooperation be obtained and good working relations established when working with the public. This can best be accomplished by using diplomacy, tact, and persuasion. Even a hostile person should be treated with courtesy and respect. Personnel should not offer opinions concerning any person, other regulatory agency, or manufacturer or industrial product. All information acquired in the course of duty is for official use only.

Gifts, Gratuities, Favors, Luncheons, Etc.

An EPA employee is forbidden to solicit or accept any gift, gratuity, entertainment (including meals), favors, loans, or any other thing of monetary value from any person, corporation, or group having a contractual or a financial relationship with EPA, having an interest that may be substantially affected by such employee's official actions, or conducting operations regulated by EPA.

Attempted Bribery

Money in varying amounts may be offered by persons whose activities are being investigated. Offers are usually made by people unfamiliar with EPA rules or regulations. Other bribes may be blatant attempts to whitewash a serious violation or condition or to cause the withholding of damaging information or observations. Inspectors should:

- Ask "What is this for?" if offered something of value.
- Explain politely, if the offer is repeated, that both parties to such transactions may be guilty of violating Federal statutes.
- Not accept money or goods of any kind.
- Immediately report the incident in detail to their supervisor.

Chapter Two

Preparing for the Inspection

SECTION — PAGE

2.1 PURPOSE AND OBJECTIVES OF INSPECTION PREPARATION 2-3

2.2 DEFINING THE SCOPE OF THE INSPECTION 2-5

2.3 COORDINATING THE INSPECTION 2-7

Permitted Facilities 2-8
Enforcement Actions 2-9

2.4 DEVELOPING AND REVIEWING THE FACILITY FILE 2-11

2.5 REVIEWING APPLICABLE REGULATIONS AND ENFORCEMENT DOCUMENTS 2-15

2.6 DEVELOPING FACILITY-SPECIFIC INSPECTION PLANS AND CHECKLISTS 2-17

Notifying the Facility 2-18
Determining Health and Safety Requirements 2-19

2.7 IDENTIFYING INSPECTION EQUIPMENT 2-21

2.8 COMPLETING THE PRE-INSPECTION WORKSHEET 2-29

2.1

Purpose and Objectives of Inspection Preparation

Adequate preparation is critical to the effective performance of RCRA inspections. Generally, inspectors will have only a relatively brief period of time on-site in which to perform an inspection; therefore, it is important that the inspection be properly scoped and planned in order to use time on-site as efficiently as possible and to insure that all aspects of the facility which should be evaluated are inspected.

The inspector's objectives in preparing for the inspection should include the following:

- To determine the scope and objectives of the inspection.
- To coordinate inspection activities with other regulatory or enforcement personnel as necessary.
- To develop a thorough understanding of the technical, regulatory, and enforcement aspects of the facility.
- To develop a plan or strategy for conducting the inspection consistent with inspection objectives.
- To determine health and safety requirements and equipment needs.

Activities the inspector should undertake to achieve these objectives are discussed in the following sections.

Preceding page blank

2.2

Defining the Scope of the Inspection

The critical initial step in planning an inspection is to define the scope of the inspection. Generally, the scope will depend largely on the purpose and objectives of the inspection. For example, the scope of a routine compliance evaluation inspection (the purpose of which is to assess overall facility compliance with RCRA standards) will be different from the scope of an inspection performed to assess facility compliance with permit deadlines.

Therefore, the inspector must first determine the purpose and objectives of the inspection in order to define the scope. This is most easily accomplished through discussions with supervisory or other relevant enforcement personnel, such as an enforcement compliance specialist. Typically, inspections may be performed for a number of purposes, including:

- Routine periodic assessment of RCRA compliance.
- Review of facility activities or status with respect to an administered enforcement action.
- Review of facility compliance with deadlines established in the facility's RCRA permit.
- Response to information received concerning alleged violations at the facility.

Inspections for some of these purposes will be broad in scope. For example, routine compliance inspections or inspections performed in response to information received concerning alleged violations will generally be comprehensive in scope, and entail a detailed evaluation of all RCRA related activities at the facility. This detailed evaluation includes a review of all RCRA required records and, in some cases, waste sampling. During the record review, the inspector reviews all of the facility's RCRA records to determine if the facility has prepared and maintains all required records or plans, is keeping all required records and plans up-to-date, and is maintaining them for the required period (e.g., three years). Additionally, the inspector should evaluate, to the extent possible, whether or not data may have been falsified. Conducting the record review is discussed in Section 4.3. Waste sampling generally is not performed during routine compliance evaluations. However, it

Preceding page blank

may be necessary in some situations to verify the identity of wastes managed at the facility (e.g., in situations where the inspector believes there is a discrepancy between the wastes reported by a facility and the wastes typically generated or managed in the industry), or to identify potential releases of hazardous wastes. The need for sampling should be determined during inspection planning, discussed in Section 2.6. Sampling is also discussed further in Section 4.4.

Inspections for purposes other than routine compliance evaluation, such as to review facility status with respect to an enforcement order, may appropriately be limited to a review of the status of only those activities or waste management units covered by requirements of the order. For these types of inspections, it may not be necessary nor a good use of Regional or State resources to perform a comprehensive inspection, although in some cases it may be desireable to perform such an inspection because two goals can be accomplished with one trip to the facility. Of course, even when the scope of the inspection is initially expected to be limited, inspectors may, once on-site, determine that a more comprehensive evaluation should be performed due to the conditions encountered and should be prepared for such a situation.

Determining the purpose and scope of the inspection helps the inspector determine how to proceed with preparation for the inspection. The purpose and scope will help the inspector determine:

- What offices or agencies to coordinate the inspection with.
- What information on the facility and aspects of the facility the inspector should concentrate on in developing background information and studying the facility.
- What regulations and enforcement documents to obtain and review in preparation for the inspection.
- Whether or not sampling will be required during the inspection (preparing for sampling during the inspection is not within the scope of this document; inspectors should refer to the Technical Case Development Guidance Document, available from the Office of Waste Programs Enforcement, for guidance on sampling during inspections).
- Whether or not it is appropriate to notify the facility prior to the inspection.

Therefore, the inspector should be certain to have a clear understanding of the scope of the inspection based upon discussions with or written communications from his or her supervisor or other enforcement personnel, as appropriate to the Region or State.

2.3

Coordinating the Inspection

Inspectors should identify, based upon the scope and nature of an inspection and in consultation with their supervisors, what other offices within their agency and in sister Federal, State, or local agencies may be interested in the performance of the inspection. They should then contact these offices or agencies to coordinate inspection performance.

In general, inspections may be of interest to other offices or agencies for several reasons. For example, other offices or agencies may be interested because:

- They are pursuing a planned action that might be interfered with by the inspection or should be coordinated with the performance of the inspection.
- The inspection may provide incidental information that would be useful to them in their own regulatory or enforcement activities (e.g., an inspection at a facility with an NPDES permitted wastewater treatment facility that may be of special interest to the office responsible for water enforcement).
- The inspection is in part or in total being performed to provide them with information at their request (e.g., an inspection performed to verify permit application information or support an enforcement action).
- They share jurisdiction for RCRA enforcement at the facility, in which case scheduling joint inspections may be desireable (e.g., where a State agency has partial authorization covering some units at a facility, and the remaining units are subject to EPA enforcement).

Coordination activities the inspector may undertake will depend upon the particular situation, but may include:

- Scheduling joint inspections with other offices or agencies.
- Scheduling the inspection so as to avoid interfering with planned activities of other agencies or offices.

- Conferring with other offices or agencies to insure that the inspection satisfies their information needs (to the extent possible within the scope of the inspection).

- Obtaining relevant information on the facility's administrative or enforcement status, such as pending enforcement actions under RCRA or other environmental programs.

- Clarifying the scope of the inspection and areas of particular interest to the office requesting the inspection (e.g., the enforcement compliance specialist).

- Clarifying permit conditions or the status of the facility's permit application with the permit writer.

- Obtaining technical information on the facility from the permit writer.

- Obtaining facility information from other agencies. In particular, federal inspectors may find State and local agencies to be good sources of information on the facility. For example, some States maintain waste manifest records or histories that are useful in preparing for an inspection. Similarly, State inspectors may find that the Regional EPA office has useful information on the facility obtained prior to State authorization or for other purposes (e.g., the NPDES program).

Inspectors, or their supervisors, should make sure that all appropriate people have been contacted to insure that the scheduling of the inspection will not interfere with any planned, ongoing actions and that inspection resources will be used as efficiently as possible.

Permitted Facilities

It is particularly important that the inspector contact the responsible permit writer before inspecting facilities that have applied for or received a permit. Where the facility's permit application is undergoing review, the permit writer and the application will usually be valuable sources of information on the facility, and the permit writer may have information needs that the inspector can fulfill during an inspection (e.g., verifying completion of modifications to the facility which the permit applicant has stated have been made in amendments to the permit application). Where a facility has received its permit, the permit writer and permit are valuable information sources, and the permit imposes site-specific requirements that are subject to enforcement and should be evaluated during the inspection. In either case, the permit writer may be able to identify for the inspector suspected problem areas at a facility. Inspecting permitted facilities is discussed in detail in Chapter 3 of this document.

Enforcement Actions

Where the inspection is being conducted to support an enforcement action (e.g., to determine if a facility has come into compliance with the terms of an enforcement order), it is very important for the inspector to coordinate the inspection with the appropriate compliance officer or the attorney assigned to the action. They will be able to explain the specifics of the action and identify important areas to be reviewed at the facility in order to achieve inspection objectives. Inspectors should advise the attorney or compliance officer of the time and date of the inspection, and should obtain the phone number of the attorney or officer so that the inspector can contact him or her from the field if the inspector needs to confer on specific aspects of the inspection while at the facility (the inspector must make any such calls from the field confidentially, preferably from an off-site phone, and should give no indication to the owner/ operator that a conference has occurred).

The inspector should also determine from the compliance officer or attorney how to submit inspection results. Normally, inspection results are submitted in the inspector's report (discussed in Chapter 5); however, results can be "fast tracked" to the requesting office to expedite response actions.

2.4

Developing and Reviewing the Facility File

Regional and State RCRA program offices generally will have one or more existing file(s) on each facility to be inspected and/or may have information available on the facility through an automated data processing (ADP) system, such as the RCRA Information System (RCRIS) system currently being developed by EPA. In many Regions and States, one program office is responsible for all RCRA activities (e.g., permitting, inspections, and enforcement) and will have a central program file on each facility. In other Regions and States, responsibility for permitting, inspections, and enforcement is split among several offices and separate files may be maintained by these offices. These files typically will contain somewhat different information on the facility because they have been developed for different purposes.

In general, the office responsible for RCRA inspections should have a central inspection file on each RCRA facility. This inspection file may be part of a central program file serving all program needs (permitting, inspections, and enforcement), or it may be a file maintained solely for purposes of the office responsible for inspections. The inspector should maintain the central inspection files on each RCRA facility within his or her area of responsibility, updating the files as new information becomes available (e.g., results of recent inspections). Where inspection files are not part of a central program file, maintaining the file may require periodically reviewing and obtaining new data from files maintained by the offices responsible for permitting, enforcement, or other activities in the EPA Regional office and/or State agency. Before an inspection, the inspector should review the inspection file to determine the adequacy and timeliness of information in the file, and obtain additional or updated information from other offices as appropriate. This activity can be performed when coordinating the inspection, as discussed in section 2.3.

Preceding page blank

The inspection file should contain any and all information relating to the facility's RCRA activities. At a minimum, the file should contain:

- A summary of names, titles, locations and phone numbers of the responsible persons (operators, plant officials, municipal officials, etc.) involved in the facility's hazardous waste program. In many cases, this information may be incorporated in the Regional or State ADP system in order to facilitate contacting the facility.
- A flow chart or other illustration showing processes used and design features of present and planned units and processes at the facility.
- For treatment, storage, and disposal facilities (TSDFs), a list of the wastes that are treated, stored, or disposed by type of management.
- For generators, a list of the wastes generated, including their origin.
- Inspection reports from previous State or Regional inspections, including photographs.
- A compliance history of the site, including a listing of any past compliance or enforcement actions and the current status of the actions. This history should include copies of correspondence relating to compliance or enforcement actions.
- Biennial, annual, or other reports submitted by the facility to the State or Region including the most recent monitoring reports where applicable.
- Previous EPA studies, consultant's reports, and laboratory reports.
- Citizens' complaints filed against the facility.
- A detailed map or plot plan showing the facility layout and location of waste management units, and any available sketches or drawings of the waste management units.
- Records of any phone conversations with facility representatives.
- The letter of notification of inspection sent to the facility and any response (if the facility is notified).
- The facility's RCRA Notification Form.
- The facility's RCRA Part A Permit application (for TSDF's).
- The facility's RCRA Part B Permit application (for TSDF's, if applicable).
- The facility's final RCRA permit (for TSDF's, if applicable).

Note that the facility's Part A application, Part B application, and/or permit will provide some of the information listed in the preceding bullets, including a plot plan or map and, possibly, a flow chart or illustration showing processes and design features. Part B permit applications and final permits may be lengthy documents which may not be convenient to duplicate in the inspection file if they are already maintained in the files of another office; it may be more efficient and convenient to note in the central inspection file where these documents are maintained and how they may be obtained for review by the inspector (e.g., the point-of-contact for obtaining the document, such as the permit writer). Inspection planning for permitted facilities is discussed in detail in Chapter 3.

Once the inspector has obtained or, if necessary, assembled the inspection file, the inspector should review file information to:

- Develop a thorough technical understanding of the facility, the wastes managed, the waste management units used, and the processes employed at the facility which generate and treat wastes (as applicable).
- Develop an understanding of the compliance history of the facility, including past violations, facility efforts to correct compliance problems, and potential violations which may not have been remedied.
- Identify potential violations to be evaluated during the inspection based upon citizen complaints or inconsistencies in file materials.
- Determine applicable regulations for review (discussed in Section 2.5).
- Support development of the inspection plan for the facility (discussed in Section 2.6).

Where the facility to be inspected is a manufacturing plant, the inspector may want to obtain additional information on the types of processes used at the plant in order to better understand plant activities once on-site. Several EPA documents and other standard references on industrial processes are available; these include:

- Chemical and Process Technology Encyclopedia, Douglas M. Considine,ed. New York: McGraw-Hill Book Co., 1974.
- Encyclopedia of Chemical Technology, Herman Mark, Donald Othmer, Charles Overberger, and Glenn Seaborg, eds. New York: John Wiley Sons, 1982.

- Effluent Guidelines Development Documents, EPA, Office of Water Regulations and Standards, Effluent Guidelines Division. Effluent guidelines documents have been prepared for numerous industries regulated through categorical discharge standards promulgated under authority of the Clean Water Act.

- Background Documents for Waste Listing, EPA, Office of Solid Waste. Background documents have been prepared by EPA for all listed hazardous wastes, providing information on the material listed, its generation, and the basis for listing it as a hazardous waste.

- Understanding the Small Quantity Generator Hazardous Waste Rules - A Handbook for Small Business, EPA, Office of Solid Waste, Pub. No. 530/SW-86-019.

- Industrial Pollution Control: Issues and Techniques, Nancy Sell, Ph.D., New York: Van Nostrand Reinhold Co., 1981.

- Theories and Practices of Industrial Waste Treatment, N.L. Nemerow, Reading, Mass: Addison-Wesley, 1963.

- Industrial Water Pollution Control, W.W. Eckenfelder, Jr., New York: McGraw-Hill Book Co., 1966.

- Liquid Wastes of Industry: Theories, Practices and Treatment, N.L. Nemerow, Reading, Mass: Addison-Wesley, 1971.

- Industrial Water Pollution: Origins, Characteristics, and Treatment, N.L. Nemerow, Reading, Mass: Addison-Wesley, 1978.

- Stationary Point and Area Sources, EPA, Pub. No. AP 42.

- Air Pollution Engineering Manual, EPA, Pub. No. AP 40.

- Various publications of the Air Pollution Control Association on industrial sources of air pollution.

2.5

Reviewing Applicable Regulations and Enforcement Documents

Inspectors should determine, obtain, and review applicable regulations and enforcement documents pertaining to the facility. Generally, inspectors can determine which regulations apply to a facility based upon the information in the facility file. Inspectors can obtain copies of new or recently promulgated regulations from their enforcement office or from the Regional or State legal counsel.

It is important that inspectors use the most current versions of regulations when reviewing applicable standards. Federal RCRA standards are published in their entirety annually in Title 40 of the Code of Federal Regulations. Amendments to the Federal standards promulgated periodically during the year are published in the Federal Register, which appears daily. Information on recently published amendments, and answers to questions regarding the RCRA standards generally, can be obtained from the RCRA-Superfund HOTLINE at the following number:

- HOTLINE - 1-800-424-9346, or FTS 382-3000.

Keeping up with RCRA and obtaining recent amendments to Federal standards are discussed in detail in Appendix I.

The purpose of reviewing applicable standards is to refresh the inspector's knowledge of the standards that apply to the particular facility and what constitutes a violation of those standards. The inspector should be aware that changes in regulations which may have occurred following previous inspections may change the compliance status of a facility. Activities which may have complied with previous standards in effect at the time of an earlier inspection may not comply with current standards. Thus, the results of previous inspections, usually recorded on checklists, should be critically reviewed in light of regulatory changes which may have occurred since the inspection.

The inspector should be sure to fully understand the intent and interpretation of applicable standards in order to be able to evaluate situations which may require refined knowledge of the standards, and to answer facility representatives' questions on the regulations (within the inspector's ability and authority). If the inspector has questions concerning regulatory intent or interpretation, they can generally be answered through:

- o Discussion of the regulation with other inspection personnel, his or her supervisor, or compliance personnel.
- o Review of the preamble material that accompanies regulations when published in the Federal Register.
- o Review of policy or technical guidance on the regulation. The RCRA Hotline can identify specific applicable guidance available from EPA.

In general, the first of these alternatives is the most efficient way to answer questions because it saves the inspector from having to obtain and review a large volume of material in order to determine an answer.

Some State and Regional offices have developed an approach for institutionalizing the development of specialized regulatory expertise among inspection staff in order to be able to quickly answer regulatory questions in-house. Under this approach, responsibility for maintaining current knowledge of RCRA standards is divided among the inspection staff by subject area (e.g., landfills, incinerators). Inspection personnel are assigned individual responsibility for developing and maintaining regulatory expertise on a specific subject area. For their respective subject areas, the inspection personnel are required to understand the interpretation and intent of existing regulations, and to track and understand changes to the regulations as they are made. Regional and State enforcement supervisors should consider implementation of such a program.

Where the purpose of the inspection is to support an enforcement action (e.g., to evaluate facility progress in meeting compliance deadlines in an enforcement order), the inspector should obtain the applicable documents from the enforcement office, compliance specialist, legal counsel, or other appropriate office or enforcement official. Generally, the inspector should obtain these documents when coordinating the inspection, as discussed in Section 2.3. The inspector should review the enforcement documents to determine:

- o The specific activities or units of interest at the facility.
- o The specific non-complying conditions or violations of interest.
- o The specific activities the facility is required to have performed or to be performing in order to come into compliance.
- o The schedule according to which activities being performed to correct violations are to be completed, and intermediate milestones towards completion of required activities.

Knowing these items is important in determining the appropriate strategy for inspecting the facility and developing an inspection plan, discussed in Section 2.6.

2.6

Developing Facility-Specific Inspection Plans and Checklists

Once the inspector has determined the scope of the inspection, discussed the inspection with relevant personnel, and reviewed all background information and standards relevant to the facility, he or she should prepare a brief plan for inspecting the facility. Generally, the inspection plan does not need to be elaborate, formal, or conform to any particular format (unless the Region or State has specific inspection plan requirements); rather, the plan should be prepared in accordance with the preferences of the individual inspector. The inspection plan is usually used only by the inspector to help organize his or her thoughts on the inspection and prepare an inspection strategy.

Generally, the inspection plan should address such topics as:

o Notifying the facility - should the facility be notified prior to the inspection or will inspection objectives best be met by performing a "surprise" inspection.

o Entering the facility - how should the inspector proceed upon entry to the facility? Should the inspector conduct an opening conference with facility representatives immediately following entry to discuss the purpose of the inspection, or first proceed with a visual inspection of certain operations or units or interest at the facility (before the owner/operator may have time to stop or conceal possible violations)?

o Conducting an opening conference - what topics does the inspector want to discuss with facility representatives prior to reviewing facility records and conducting the visual inspection of the facility? If the inspector does not intend to conduct the opening conference immediately after entry, when does he or she want to conduct the conference, if at all?

o Performing the record review - what facility records should the inspector pay particular attention to (review most thoroughly), based on information reviewed on the facility and any enforcement actions being undertaken?

- Conducting the visual inspection - what route through the facility or order of inspection does the inspector want to follow, if possible? What should the inspector be paying particular attention to in inspecting individual units (e.g., compliance with requirements of an enforcement action)?

Generally, the plan should lay out how the inspector intends to proceed once on-site, and highlight any particular questions the inspection should address. Conducting the inspection is discussed in Chapter 4, which provides details on performing the activities listed above.

The inspection plan can also be used by the inspector as a way to organize information that the inspector may need while on-site, such as names and phone numbers of the facility representatives to be met with, the name and phone number of the enforcement attorney assigned to facility (if applicable), and similar information.

As part of the planning process, the inspector should determine which checklists (if any) to use for assessing facility compliance with RCRA standards. Example checklists are provided in Appendix IV of this document; inspectors may use these checklists, or checklists which have been developed or selected for use by their Regional office or State agency. Inspectors should review checklists during the planning stage to familiarize themselves with the information required, and make any changes necessary to the checklist to incorporate requirements of enforcement orders, amendments to regulations, or State-specific standards. When inspecting permitted facilities, inspectors may want to develop facility-specific checklists which address permit requirements; preparing for inspecting permitted facilities is discussed in Chapter 3.

Notifying the Facility

Notifying the facility prior to an inspection may or may not be appropriate depending upon:

- The purpose of the inspection and inspection strategy.
- Regional or State policy concerning notification.
- Suspicion that the facility is engaged in illegal dumping or other illegal (particularly criminal) activities.
- The length of time the inspection is expected to require. Long inspections of complex facilities may require a substantial amount of facility workers' time. It may be desireable to schedule long inspections with the facility to insure that facility staff are available, unless the purpose of the inspection requires surprise.

For example, it may (depending on Regional or State policy) be appropriate to notify facilities of routine periodic compliance inspections when the facility is not expected to have significant violations (e.g., based on past inspections) and the inspector needs to speak with specific facility personnel. However, it will not be appropriate to notify a facility suspected of criminal illegal dumping or other criminal violations prior to an inspection, because notification would provide the facility with an opportunity to cover-up the illegal activity. Generally, it will not be appropriate to notify facilities in advance of inspections performed where violations are known or suspected to exist, where the purpose of the inspection is to support a specific enforcement action, and/or where a "cover-up" is anticipated.

Inspectors should consult with their supervisors and responsible compliance officers or attorneys if they have questions concerning whether or not to notify a facility of an inspection. Methods used to notify facilities vary with inspection purpose, and include:

- An annual notification letter which establishes the authority for inspections without specifying an inspection date.
- A specific inspection letter sent out a month before the inspection informing the facility that an inspection will be conducted within a month.
- An advance phone call to the facility to notify the facility of the inspection date and make appointments to see particular personnel.

The first two methods can be used alone, in conjunction with the third method, or not at all. An advance phone call may be used in conjunction with a letter and generally is used prior to inspections where certain records are to be checked (to insure they are available to the inspector), certain personnel are to be interviewed, or comprehensive sampling is to be performed (for arranging split sampling).

When notifying the facility by phone or specific inspection letter, the inspector should inform the facility of the inspector's name and the organization or agency the inspector represents.

Determining Health and Safety Requirements

Although routine inspections generally do not involve activities in which inspectors must physically contact hazardous wastes (except inspections involving sampling, in which incidental contact with wastes may occur), there is always the potential for inspectors to be exposed to hazardous wastes or substances during the course of an inspection. Therefore, in planning the inspection, inspectors should:

- Determine the nature of the chemical hazards that may be encountered during the inspection (based on the types of materials handled on-site, as identified in the file review).

- Identify and obtain proper safety equipment.

- Become familiar with the proper use of safety equipment (if not already familiar with its use), check equipment for proper function, and perform necessary maintenance on the equipment (if appropriate and within the technical abilities of the inspector).

- Obtain and become familiar with all applicable safety guidances and practices. Information on EPA directives on safety and health, and on Occupational Safety and Health Administration (OSHA) standards for hazardous waste facilities, is provided in Appendix V.

- Determine any facility-specific safety requirements by contacting the facility (only in cases where the facility is being notified of the inspection) or by review of previous inspection notebooks.

The inspection equipment checklist in Section 2.7 lists health and safety equipment that may typically be required in performing routine compliance inspections. In many cases, facilities may require that the inspector have standard safety equipment listed on this checklist. Inspectors should use this checklist in conjunction with information on the chemical hazards at the facility and applicable EPA guidance and OSHA requirements to select appropriate health and safety equipment for performing the inspection.

In some cases, the inspector will have limited information on the facility, or may be inspecting an uncontrolled site. The inspector should be prepared to encounter the worst conditions in such cases. Inspectors should never proceed with inspections involving site conditions for which they are not prepared and do not have the proper safety equipment.

2.7

Identifying Inspection Equipment

The kind of equipment that the inspector takes into the field is dependent on the kind of inspection to be performed and the type of facility to be inspected. Inspectors should use their knowledge of the facility, understanding of inspection objectives, training, and experience to decide which equipment is necessary for a particular inspection. Inspectors may wish to consult with other inspection personnel or their supervisor in determining equipment requirements. Inspection requirements, the availability of certain equipment, and Regional or State policies and conditions should also be considered when selecting equipment during inspection planning.

Exhibit 2-1 provides a list of equipment that is commonly used in performing inspections. Inspectors may not need all of the equipment listed for every inspection; however, inspectors may need additional equipment for some inspections. The list is divided into four categories of equipment: general equipment, safety equipment, sampling equipment, and paperwork. Exhibit 2-2 provides examples of several forms that may be required during inspections.

The inspector should identify and obtain the equipment necessary to perform the inspection from the appropriate source. The inspector should check inspection equipment to insure that it is in good working order prior to going into the field, and should perform, or have performed by the appropriate agency personnel, any needed maintenance or repairs. The inspector should also insure that he or she is familiar with the use of the equipment; generally, the use and operation of most of the standard inspection equipment listed is apparent.

Special circumstances may require the use of additional equipment such as fireproof clothing or self-contained breathing apparatus. The inspector should determine whether such additional equipment is necessary in conjunction with his or her supervisor, and, if appropriate, the facility's owner/operator or plant manager.

EXHIBIT 2-1. LIST OF INSPECTION EQUIPMENT

General Equipment

- Camera, film, and flash equipment
- Pocket calculator
- Tape measure
- Clipboard
- Waterproof pens, pencils and markers
- Locking briefcase
- "Confidential Business Information" stamp (if needed)
- Stamp pad
- Envelopes pre-addressed to Document Control Officer (for CBI)
- Plain envelopes
- Polyethylene bags
- Disposable towels or rags
- Flashlight and batteries
- Pocket knife
- Pocket tape recorder
- Level
- Range finder/optical tape measure
- Compass
- Stopwatch
- Wind meter or Admiral Beaufort wind scale
- Square
- Ruler (for use as scale in photos)

EXHIBIT 2-1. (CONTINUED)

Safety Equipment

- Safety glasses or goggles
- Face shield
- Ear plugs
- Coveralls, long-sleeved
- Hard hat
- Plastic shoe covers (disposable)
- Rubber-soled, metal toed, non-skid shoes
- Liquid-proof gloves (disposable if possible)
- Long rubber apron
- Respirators and cartridges
- Self-contained breathing apparatus

Paperwork

- Proper identification
- Copy of facility's inspection file, permit, and monitoring schedule, including:
  - maps
  - photographs
  - enforcement actions
- Notebook
- Notice of inspection (if applicable)
- Chain of custody record
- Checklists
- Code of Federal Regulations or applicable State code
- EPA Regional or State forms for:
  - inspection confidentiality notice
  - enforcement actions notice
  - declaration of confidential business information
  - receipts for documents and o samples
- Field data sheets

EXHIBIT 2-1. (CONTINUED)

Sampling Equipment

- Bucket auger
- Bucket
- Containers
  - jars
  - plastic (for metals)
  - organic sample containers
- Bailers
- Pumps
- Rope
- Glass tubes
- Ice
- Scoops
- Trowels
- Bacon Bomb
- Tape
  - labelling
  - duct
  - electrical
- Conductivity meter
- Thermometer
- Dissolved oxygen meter
- Steel tape measure
- Sampling safety equipment (in addition to equip. on the safety equip. list)
  - Tyvek suit
  - booties
  - gloves
  - harnesses
  - chemical resistant suit
  - Organic Vapor Analyzer (OVA)
- Decontamination equipment
  - buckets
  - Alconex
  - brushes
  - grate
  - deionized water
  - solvents for equipment cleaning
  - steam cleaning machine
  - plastic bags

EXHIBIT 2-2. EXAMPLE CONFIDENTIALITY FORMS

U.S. ENVIRONMENTAL PROTECTION AGENCY
RCRA INSPECTION
CONFIDENTIALITY NOTICE

Name and Address of Inspector(s)	Name and Address of Facility	
	Owner, Operator, or Agent in Charge	
	Title	
	Address	
Name of Individual to Whom Notice Given	Title	Date

It is possible that EPA will receive public requests for release of the information obtained during inspection of the facility above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 U.S.C. 552; EPA regulations issued thereunder, 40 CFR Part 2; and the Resource Conservation and Recovery Act, Section 3007, as amended. EPA is required to make inspection data available in response to FOIA requests, unless the Administrator of the Agency determines that the data contains information entitled to confidential treatment.

Any or all of the information collected by EPA during the inspection may be claimed confidential, if it relates to trade secrets or commercial of financial matters that you consider to be confidential. If you make claims of confidentiality, EPA will disclose the information only to the extent, and by the means of the procedures set forth in the regulations (cited above) governing EPA's treatment of confidential information. Among other things, the regulations require that the EPA notify you in advance of publicly disclosing any information you have claimed and certified confidential.

To claim information confidential, you must certify that each claimed item meets all of the following criteria:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

2. The information is not, and has not been, reasonably obtainable without your company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).

3. The information is not publicly available elsewhere.

4. Disclosure of the information would cause substantial harm to your company's competitive position.

At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time you may make claims that some or all of the information is confidential and meets the four criteria listed above.

EXHIBIT 2-2. (CONTINUED)

RCRA INSPECTION CONFIDENTIALITY NOTICE	Facility

If you are not authorized by your company to make confidentiality claims, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials, to the Owner, Operator, or Agent in Charge of your firm, within two days of this date. That person must return a statement, specifying any information which should receive confidential treatment.

This statement from the Owner, Operator, or Agent in Charge should be addressed to:

and mailed by registered, return-receipt requested mail with in seven (7) calendar days of receipt of this Notice.

Failure by your firm to submit a written request that information be treated as confidential, either at the completion of the inspection or by the Owner, Operator, or Agent in charge, within the seven-day period, will be treated by the EPA as a waiver by your company of any claims for confidentiality regarding the inspection data.

To be completed by the facility official receiving this Notice:

I have received and read this Notice.

Name______________________________

Title______________________________

Signature______________________________

Date________________

If there is no one on the premises of the facility who is authorized to make business confidentiality claims for the firm, a copy of this Notice and other inspection materials will be sent to the Owner, Operator, or Agent in charge of the company. If there is another company official who should also receive this information, please designate below:

Name______________________________

Title______________________________

Address______________________________

____

EXHIBIT 2-2. (CONTINUED)

REQUEST FOR CONFIDENTIAL TREATMENT

Name of Individual	Title Date
Firm Name	Firm Address

Information for which Confidential Treatment is requested:

Acknowledgement of Claimant

The undersigned requests that confidential treatment of the information described be provided in accordance with provisions of the Freedom of Information Act (FOIA), 5U.S.C.552; EPA regulations issued thereunder, 40 CFR Part 2; and the Resource Conservation and Recovery Act (RCRA), Section 3007, as amended. The undersigned further acknowledges that he/she is authorized to make such claims for his/her firm.

The undersigned also certifies that each item described above meets all of the following criteria: (1) The company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures: (2) The information is not, and has not been, reasonably attainable without the company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial of quasi-judicial proceeding; (3) The information is not publicly available elsewhere; and (4) Disclosure of the information would cause substantial harm to the company's competitive position.

Signature (Owner, Operator, or Agent)	Title
Name of Inspector Title	Inspector's Signature

EXHIBIT 2-2. (CONTINUED)

U.S. ENVIRONMENTAL PROTECTION AGENCY

RECEIPT FOR SAMPLES AND DOCUMENTS

Inspector(s) Name and Address		Firm Name and Address
		Name of Individual
		Title
Date Collected	Samples were: ( ) Purchased	( ) Received no charge ( )Borrowed
Sample Numbers		Amount paid for Samples
Duplicate Samples Requested ( ) Yes ( ) No	Method of Payment ( ) Cash ( ) Voucher ( ) To be Billed	

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Resource Conservation and Recovery Act.

Receipt for the document(s) and/or Sample(s) described below is hereby acknowledged:

Signature (Owner, Operator, or Agent		Title
Name of Inspector	Title	Inspector's Signature

2.8

Completing the Pre-Inspection Worksheet

A pre-inspection worksheet, shown in Exhibit 2-3, has been developed for two purposes:

- As an internal check of pre-inspection activities.
- As a planning tool to enable the inspector to perform pre-inspection activities more effectively.

This worksheet is designed to insure that, at a minimum, inspectors have identified, assembled, and reviewed all relevant materials prior to departure for the inspection. Proper preparation for the inspection, as documented by completion of the worksheet, helps to insure that the inspection will be performed efficiently and will meet inspection objectives. Since Regional and State inspection needs, objectives, and procedures may vary, this worksheet is intended as a guide and should be modified to reflect and incorporate the specific needs of the inspector.

EXHIBIT 2-3. PRE-INSPECTION WORKSHEET

Date Completed	Description of Activity
________	Complete and verify the general information section of the inspection report
	Identify and obtain all relevant information:
________	Manifest history
________	Notification form
________	Part A permit application
________	Previous inspection reports
________	Correspondence
________	Part B permit application (if available)
________	Annual reports
________	Other
	Assemble inspection package:
________	Notification form
________	Part A permit application
________	Previous inspection reports
________	Waste generation and characterization information
________	Information from air and water pollution control agencies or offices
________	Inspection checklists
________	Copies of State statutes and regulations or Federal laws and regulations
________	Safety equipment
________	Camera and film
________	Agency identification card
________	Sampling equipment (if necessary)
________	Other
	Scheduling the investigation:
________	Letters of intent to visit/inspect
________	Establish date(s) of the inspection
________	Follow-up telephone call to confirm date(s) of the inspection and request additional information be made available upon inspection
________	Complete inspection plan
________	Other

Chapter Three

Procedure for Developing Permit-Specific TSDF Inspection Plans

SECTION PAGE

3.1 INTRODUCTION 3-3

Alternative Approaches 3-4
Assembling Pertinent Materials 3-5

3.2 METHODOLOGY FOR DEVELOPING INFORMATION SHEETS AND INSPECTION CHECKLISTS 3-7

3.3 DEVELOPING AN INSPECTION PROTOCOL 3-9

Site Orientation 3-10
Release Points 3-24
Other Conditions 3-27

3.1

Introduction

Generic checklists, reviewing the various 40 CFR Part 265 requirements, proved useful for conducting interim status inspections. The checklists served to guide less experienced inspectors through the facility, and served as a helpful reminder to more experienced inspectors. Generic checklists were "efficient" in that they were equally applicable to all facilities, although facility-specific conditions, e.g., those imposed through orders and consent decrees, created the need to supplement the generic checklist to some degree. The fact that permitted facilities are subject to permit conditions based on site-specific circumstances negates the value of a generic checklist approach to inspections. Since each permit imposes site-specific requirements, no single checklist can be used to review all permits. The purpose of this Chapter is to describe methods for developing site-specific inspection plans for permitted facilities.

At first glance, the task of creating site-specific inspection plans, as opposed to using a generic checklist, appears inefficient, especially given the length of the permit and its associated attachments. However, the development of site-specific inspection plans offers several advantages to the compliance and enforcement program, not the least of which is the opportunity for the inspector to immerse him/herself in the facility's operations, and understand the relationship of the facility's overall operations to subsequent permit conditions. The very fact that the permit conditions are site specific forces the inspector to understand the facility in greater detail. This, in turn, should result in more thorough inspections.

On the other hand, the cost of the inspection planning effort for permitted facilities will likely be more resource intensive than inspection planning for interim status facilities. The mere size of RCRA permits, inclusive of all relevant attachments, attests to the potential magnitude of the effort. Moreover, if the Region's inspection program is unable to retain experienced inspectors, the long-term benefits of a comprehensive review of the permit files will not be realized. The graduation of facilities into permitted status puts an increased premium on the maintenance of an experienced inspection staff.

Preceding page blank

3.1.1 Alternative Approaches

This chapter does not endorse any single approach to developing facility specific inspection plans. Two "models" are considered; the inspector may choose either model, or a variation of either model. The two models are listed below:

- Checklist: The concept is similar to the interim status checklist. The inspector will need to review the permit files, select those conditions that can be inspected readily, and use this as a basis for developing a checklist. The checklist can be inclusive of all conditions, or focus on specific conditions. An all inclusive check list may be designed to be used for all subsequent inspections, whereas a focused checklist may only be useful for a single case development inspection. Alternatively, the all inclusive checklist can be made up of several components (e.g., the waste analysis plan action) which may be selected for use, as appropriate, in a more focused inspection.

- Permit Information Summary Sheets: Information summary sheets differ from checklists in that they provide the inspector with only the most basic facility information (that may be too complex or troublesome to commit to memory), and a list of key points or concerns that need to be covered during the inspection (e.g., concerns over possible releases from one of the facility's units, or past compliance problems). This information may include the number and status of facility units, both regulated and non-regulated, their status (operational, closing, closed) and waste generation and handling. Since only limited information is provided on the summary sheets, the inspector needs to have familiarity with the site, either through review of records or recent first hand knowledge. This knowledge can obviate the need for the construction of detailed checklists. A disadvantage of using an information summary sheet is that the facility inspection probably will not allow for verification of a facility's compliance with every aspect of its permit. Use of summary sheets requires more judgment on the part of the inspector, and may be inappropriate for less experienced inspectors. Despite these shortcomings, the summary sheets still represent an attractive alternative, as inspectors can productively spend their time focusing on: 1) assembling a detailed and exacting list of concerns upon which the inspection will be based, and 2) applying their knowledge and experience in investigating each of the identified concerns.

In choosing either approach, management should consider several factors, including: the purpose of the inspection, the complexity of the facility, and the experience of the inspector. In any case, the selected technique should assure that the goals of the inspection are successfully attained.

3.1.2 Assembling Pertinent Materials

Upon the selection of an inspection approach, the inspector must assemble all pertinent sources necessary to develop the selected protocol. The first, and perhaps most important source is the expertise of other Agency/State officials familiar with the site. Enforcement officials and permit writers familiar with the facility may assist in determining the major areas of interest at the facility, such as potential release points and past compliance problems. In addition, these officials should be able to assist the inspector in determining whether other documents, beyond those contained in the permit, may be useful in arriving at a complete picture of the facility.

At a minimum, the inspector should review the following pertinent documents: (1) the permit (inclusive of all referenced attachments); (2) any (Federal/State) orders and consent decrees; and (3) any "self implementing" regulations to which the facility may be subject. Other documents of interest may include past inspection reports, relevant guidance materials, RCRA Facility Assessments, and past communications with the facility, e.g., Notices of Deficiency (NODs). The purpose for reviewing the three major documents are summarized below:

(1) The Facility's RCRA Permit and Permit Application - The permit contains most of the site-specific conditions and requirements that a facility must meet to be in compliance. If conditions of the facility permit are found to be inconsistent with the regulations, the permit may serve as a shield. The content of the facility permit takes precedence over any language contained in the facility's part A or part B permit application.

The RCRA permit is generally comprised of a series of modules addressing each of the following:

- A general facility description
- Standard conditions
- General facility conditions
- Unit specific conditions and requirements
- Detection monitoring requirements
- Compliance monitoring requirements
- Corrective action for regulated units
- HSWA corrective action for solid waste management units
- Post-closure requirements.

In general, these modules are written to track closely with the regulations, but a variety of styles may be encountered. For example, some permits may have all inspection requirements, or perhaps all reporting requirements, organized in one place in the permit. A different format may also result where State requirements go beyond the Federal RCRA requirements. Inspectors are encouraged to discuss the contents of the permit with the permit writer prior to file review.

In reviewing the body of the permit, inspectors will find that numerous references are made to the permittee's RCRA part B permit application, and that specific portions of these documents are incorporated by reference. Inspectors should be aware that the descriptions, procedures and protocols which are referenced in this manner are enforceable permit conditions. As a practical matter, this means that the inspector cannot rely solely on the main body of the permit, but must also consult the referenced attachments. Inspectors should also be aware that the public hearing process, prior to permit issuance, may have resulted in changes being made to the submitted information. These changes would be documented as part of the permit's administrative record.

In some cases, inspectors will find that facilities have been issued more than one RCRA permit. These permits may have been written at different times and may regulate different units at the facility. It is also possible that one permit will be issued by the State authority and another by EPA. These situations arise where States lack the authority to impose certain requirements, such as HSWA corrective action requirements. In such cases, the EPA issued permit will cover only the HSWA requirements. Nonetheless, the facility will have to meet both State and Federal requirements. Federal inspectors may coordinate with State inspectors in conducting a complete review of the facility. Alternatively, the Federal inspector can focus his/her attention on the Federal requirements, leaving the State inspector to conduct an inspection of facility compliance with State-imposed requirements.

(2) Orders and Consent Decrees - Any orders or consent decrees issued to the facility are important because they contain specific provisions with which the facility must comply. Where inconsistencies arise between the permit and order/consent decree, the orders or consent decrees will take precedence.

(3) RCRA Regulations - In some instances, permits will not have been modified to reflect new regulations that were promulgated since the permit was originally issued. This does not mean that the facility need not comply with these requirements. Indeed, EPA has determined that many regulations are self implementing, and do not require specific permit language to be enforceable. Specific examples include the land disposal bans, double liner requirements for surface impoundments, and the prohibition of liquids in landfills. In addition, as new wastes are listed as hazardous, or new characteristics are promulgated, additional wastes at the facility may be deemed hazardous. By knowing the facility's production processes, the inspector may be able to identify additional requirements with which the facility will need to comply.

3.2

Methodology for Developing Information Sheets and Inspection Checklists

The inspector needs to follow a consistent and logical strategy for developing inspection procedures. The strategy should be focused on the specific purpose of the inspection at hand, and be sensitive to the fact that inspectors have only a limited amount of time to prepare for and actually conduct inspections. Depending on time constraints, it may not prove possible for inspectors to verify a facility's compliance with every single regulatory provision (e.g. measurement of aisle space). Under such conditions, inspection priorities may need to be structured. In other instances, time may allow for a detailed review of all applicable requirements. A checklist is only a tool for conducting an inspection; complete reliance on the checklist as a means of preparing/conducting inspections is not recommended.

Information protocols should be developed in accordance with the following basic principles:

- Where possible, questions should be phrased to allow for a "yes" or "no" answer, with affirmative answers being indicative of good/compliant conditions. This allows reviewers to easily focus on problem areas.
- The wording of questions should be as specific as possible. Ambiguity in checklist language may cause problems in making final compliance determinations. Questions with multiple components should be avoided so that "No" answers refer to a single specific provision or requirement.

In addition, the inspector may find it useful to include citations to the applicable permit/order provisions in the inspection protocol. While cites were not provided in the following examples, they may be useful in developing subsequent Notices of Violation, Warning Letters, or formal enforcement actions.

3.3

Developing An Inspection Protocol

This section provides a series of examples of how an inspector may consider permit conditions in developing an inspection protocol. This section is divided into three separate subsections corresponding to: 1) an overall site orientation; 2) releases; and 3) "other" permit conditions.

The first subsection considers those items essential in orienting the inspector to the site. The rationale behind this subsection is that an inspector should not visit a site without first understanding the general site settings. An understanding of the facility is essential for several reasons, including the establishment of credibility in the opening conference, conducting an organized walk through of the facility, assuring appropriate safety precautions are taken, and sharpening the focus of the compliance review. Items of importance include the facility's manufacturing operations, its regulated activities (both units and wastes), the status of those units/wastes, and any other important considerations, such as solid waste management units undergoing corrective action. It is recommended that this type of orientation information is always compiled and reviewed by the inspector.

The second subsection deals with provisions related to releases and potential releases. The overall purpose of RCRA is to protect human health and the environment. Thus, special attention should be placed on potential release points. This subsection considers examples of those conditions that an inspector may review to determine compliance with those aspects of the permit related to releases or potential releases. In addition, discovery of releases or potential releases may lead to the inspection of additional requirements, either via permit modifications or orders, that may be imposed on the facility. If inspections do not have a specific enforcement focus, and the time available for the inspections are limited, detection of possible releases is an obvious priority.

The third subsection reviews items related to the operation and maintenance of various aspects of the facility. In many cases, the design aspects of various units cannot be readily verified. Unit design and construction received tremendous attention during permit development. The units must now be operated and maintained properly to continue to achieve design standards. Consequently, reviewing permit conditions related to

Preceding page blank

operation and maintenance of the facility is an important aspect of facility compliance. The type of elements addressed in all three of these subsections should be covered in the course of a routine facility inspection.

3.3.1 Site Orientation

As stated earlier, every inspection protocol must include information related to the facility's general operations. The inspector is the Agency's representative, and he/she must provide a credible presence in the opening conference as well as in the overall conduct of the inspection. In addition, a careful review of the facility's operations will allow for a time-efficient, safe inspection. This can best be accomplished by reviewing all relevant information (including attachments, references, and revisions), as well as talking to the permit writer, previous inspectors of the site, and enforcement officials who may be aware of pre-existing or ongoing problems at the facility.

The inspector may be inclined to review solely the body of a RCRA permit due to the fact that permit attachments may number hundreds of pages. Table 3-1 provides a listing of 26 separate attachments from a permit whose "body" is less than a hundred pages in length. Note the importance of the information contained in these attachments as they relate to an inspection. Likewise, Table 3-2 provides a list of revisions that are to be incorporated into the permit prior to approval. In this case, an inspector with a copy of the draft permit may miss several important changes to the permit's final conditions.

The inspector should review all relevant documents to develop a fact sheet on general operational characteristics of the facility. This includes: a description of the facility's physical boundaries, the types and locations of waste management units that are covered by the permit, groundwater monitoring well locations, the status of each permitted unit (e.g., under construction, operational, being closed, closed), the types of processes that generate the wastes being managed in these permitted units, and the types and characteristics of wastes being stored, treated, or disposed in these units. Permit conditions that exemplify these types of information requirements are discussed below.

TABLE 3-1. EXAMPLE LIST OF ATTACHMENTS

The following documents are excerpts from the Permittee's RCRA permit application. The listed documents are hereby incorporated, in their entirety, by reference into this permit. The Department and the Agency have, as deemed necessary, modified specific language in the Attachments. These modifications are described in the permit conditions (Sections I through IX), and thereby supercede the language of the original Attachment. These incorporated Attachments are enforceable conditions of this permit, as modified by the specific permit conditions.

Attachment 1	Facility Legal Description and Map of Facility Location, consists of: Figure 8-1 of permit application, as last revised May 1987.
Attachment 2	Waste Analysis Plan, consists of: Exhibit 2 of permit application, as last revised June 1987.
Attachment 3	Security Procedures, consists of: Section B.3 of permit application, as last revised June 1986.
Attachment 4	Inspection Plan, consists of: Exhibit 3 of permit application, as last revised May 1987.
Attachment 5	Training Plan, consists of: Exhibit 9 of permit application, as last revised May 1987.
Attachment 6	Hazards Prevention, consists of: Section E of permit application, as last revised May 1987.
Attachment 7	Contingency Plan, consists of: Exhibit 8 of permit application, as last revised June 1987.
Attachment 9	Closure Cover Design details, consists of: o Exhibit 20A: Final Cover Design, Landfills L-1, 3, 5, & 6; o Exhibit 20B: Closure Cover Design, Landfills L-7, 8, 9, 10 & 12; o Exhibit 20C: Closure Cover Design, Landfill L-13. (Exhibits 20A, 20B, and 20C of permit application last revised May 1987).
Attachment 10	Closure and Post-closure Plans -- Cost Estimates, consists of: Separate document of permit application, as last revised June 1987.
Attachment 11	RCRA Part A permit application, consists of: o EPA Form 3510-1, dated May 15, 1987; and o Part II -- Part A of the RCRA Permit Application, pages II-1 through II-16. (Part II of permit application, last revised May 1987).

TABLE 3-1. (CONTINUED)

Attachment 12 Container Storage -- Design and Operations, consists of:
Section D.2 of permit application, including:
- o Attachment (Appendix) 1: Concrete Pad Sealant Specifications; and,
- o Attachment (Appendix) 2: Overpacked Drum Specifications.
(Section D.2, including Appendices 1 and 2, last revised June 1987).

Attachment 13 Bulk Liquid Storage -- Design and Operations, consists of:
Section D.3 of permit application, including:
- o Attachment (Appendix) 1: Tank Ultrasonic Test Results.
(Section D.3 last revised June 1987).
(Appendix 1 dated March 4, 1986).

Attachment 14 Stabilization Unit -- Design and Operations, consists of:
Section D.4 of permit application, including:
- o Attachment (Appendix) 1: Stabilization of Liquid Hazardous Wastes by Solidification; and,
- o Attachment (Appendix) 2: Reactivity Evaluation of Lime Based Stabilization Reagents.
(Section D.4, including Appendices 1 and 2, last revised May 1987).

Attachment 15 Reactive Solids Hydrolysis Unit -- Design and Operation, consists of:
Section D.5 of permit application, last revised May 1987.

Attachment 16 Truck washing unit -- Design and Operation consists of:
Section D-6 of permit application, as last revised June 1987.

Attachment 17 Surface Impoundment Units -- Design and Operation consists of:
Section D-6 of permit application, as last revised June 1987.

Attachment 18 Impoundment Drawings, consists of:
- o Exhibit 4A: Existing Surface Impoundment Drawings; and,
- o Exhibit 4B: Proposed Surface Impoundment Drawings.
(Exhibits 4A and 4B of permit application last revised May 1987).

Attachment 19 Landfill/Impoundment Technical Specifications, consists of:
- o Exhibit 16A: Technical Specification: Landfill L-13;
- o Exhibit 16B: Technical Specification: Landfill L-12 and Impoundments P-A, P-B, and P-C;
- o Exhibit 16C: Technical Specifications: Landfill L-13 Cells 1 and 2 (modifies Exhibit 16A); and,
- o Exhibit 16D: Technical Specifications: Landfill L-13 Cells 3 through 6 (modifies Exhibit 16C).
(Exhibits 16A, 16B, 16C, and 16D of permit application last revised May 1987).

TABLE 3-1. (CONTINUED)

Attachment 20	Soil Liner Details, consists of: o Exhibit 7B: Quality Assurance Manual for the Installation of Soil Components of Linings and Final Cover Systems. (Exhibit 7B of permit application last revised June 1986).
Attachment 21	Synthetic Liner Details, consists of: o Exhibit 5B: Specification Guidelines for the Procurement and Installation of High Density Polyethylene Geomembranes: and, o Exhibit 5C: Quality Assurance Manual of the Installation of High Density Polyethylene Geomembranes. (Exhibits 5B and 5C of permit application last revised June 1986).
Attachment 22	Response Action Plans, consists of: o Exhibit 21A: Response Action Plan for Landfill L-13, Cells 1 and 2; and, o Exhibit 21B: Response Action Plan for Surface Impoundments P-A, P-B, and P-C. (Exhibit 21A of permit application last revised April 1987). (Exhibit 21B of permit application last revised May 1987).
Attachment 23	Landfill -- Design and Operation, consisting of: Section D.7 of permit application, as last revised June 1987.
Attachment 24	Landfill Drawings and Reports, consisting of: o Exhibit 6A: Existing Landfill Drawings (L-7 through L-10); and o Exhibit 6B: New Proposed Landfill Drawings (L-13 and L-12). (Exhibit 6A of permit application last revised February 1987). (Exhibit 6B of permit application last revised June 1987).
Attachment 25	Surface Water Management Plan, consists of: Section 2.B of permit application, as last revised March 1987.
Attachment 26	Groundwater Monitoring Program, consists of: o Exhibit 10 Section 4: Design and Construction of Groundwater Monitoring System; o Exhibit 10 Section 5: Groundwater Sampling and Analysis; o Exhibit 10 Section 6: Detection Monitoring Program; o Exhibit 10 Section 7: Groundwater Monitoring Data Evaluation; and, o Exhibit 10 Appendix C: Manual for Groundwater Sampling (Waste Management, Inc.). (Exhibit 10 of permit application last revised July 1987).

TABLE 3-2. EXAMPLE

DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

SOLID WASTE FORM NO. 8
Permit For
Residual Waste Disposal Facility

ABC Mfg.
Texas, Facility
Impoundment No. 6

Permit No. ____________________
Date Issued ____________________
Date Expired ____________________

---

1. This permit is issued in response to Solid Waste Management Application 214214 dated April 19, 1985 and subsequent revisions which are as follows:

   a. ABC Mfg., Texas Plant Hazardous Waste Management Facility Permit Application Part B Impoundment No. 6 dated April 19, 1985, received April 19, 1985 which included residual waste Modules 1, 2, Form 1 Phase 1, Revised December 9, 1985, Module 3, Module 3 9, and Module 10.

   b. Designo's Final Design Report, Chemical Landfill No. 6, ABC Mfg., Volume 1 of 5 Volumes, June 27, 1984, revised April 19, 1985, received April 19, 1985.

   c. ABC Mfg. Final Design Report, Chemical Landfill No. 6, ABC Mfg., Volume 2 of 5 Volumes, Analyses and Specifications, revised April 19, 1985, received April 19, 1985.

   d. Designo's response letter May 23, 1985, received May 24, 1985.

   e. Designo's Stream Relocation Chemical Landfill No. 6, ABC Mfg., Volume 4 of 5 Volumes, received April 19, 1985 with drawings 1(e) of 4 dated June, 1984, 2(e) of 4 revised July 17, 1984, 3(e) of 4 received July 17, 1984, and 4(e) of 4 dated February, 1985.

   f. Designo's Erosion and Sedimentation Control Plan Narrative April 19, 1985, with drawings 1(b) of 3 dated May 1984, 2(b) of 3 dated June 1984, 3(b) of 3 revised June 1984.

   g. Designo's response letter September 23, 1985 received September 25, 1985.

   h. ABC Mfg., response letter May 23, 1985 received May 24, 1985 and the following revisions to the Part B application for Impoundment No. 6 revised April 19, 1985.

TABLE 3-2. (CONTINUED)

1. Section XVI Inspection, Instruction, Continued revised May 22, 1985.
2. Section XIX Closure Plan and Addendum Continued revised May 22, 1984.
3. Section XX Post Closure Addendum, revised May 23, 1985.
4. Surface Impoundment Evaluation and Repair Plan Addendum, Section B, revised May 23, 1985.

i. ABC Mfg., response letter September 3, 1985.

j. ABC Mfg., response letter September 24, 1985 and the following attachments:

1. Laboratory report #914 September 3, 1985 testing of coupon of (HD) after one year in waste tank of ABC Mfg., received September 25, 1985.
2. Brown's Quality Control Manual.
3. Brown's Recommended Procedure for Pipe Boot Construction.,
4. Jones Industries Polyvinyl Chloride Plastic Linings.
5. Jones Industries General Instructions For Installation of Staff Liners For Preventing Seepage From Ponds, Reservoirs, Canals, Lagoons, etc.

k. Hydrogeologic investigation Impoundment No. 6 Texas Plant January 1985 revised April 1985, submitted by American Consultants received April 19, 1985.

l. Response to Texas Department of Environmental Resources Comments Regarding Site Hydrogeologic Conditions Proposed Impoundment No. 6 Texas Plant May 22, 1985, submitted by American Consultants.

m. Response to Texas Department of Environmental Resources Technical Comments Impoundment No. 6 Texas Plant September 12, 1985 submitted by American Consultants.

n. The following American Consultant drawings:

1. American Consultants drawing Figure 1 April 17, 1985 received April 19, 1985.

TABLE 3-2. (CONTINUED)

2. American Consultants drawing Figure 2 revision 2, May 20, 1985 received May 24, 1985.
3. American Consultants drawing Figure 4, revision 2 April 17, 1985 received May 24, 1985.
4. American Consultants drawing Figure 5,revision 2 April 17, 1985 received May 20, 1985.
5. American Consultants drawing Figure 5, April 18, 1985.

o. The following Designo's plan drawings:

1. Designo's Exhibit 6.2 Environmental Resource Map, revision 2, May 1984.
2. Designo's Sheet No. 1EB of 1 May 1985.
3. Designo's Sheet No. 1 of 15 revision 1 June 1984 received October 2, 1985.
4. Designo's Sheet No. 2 of 15 October 1, 1985 received October 2, 1985.
5. Designo's Sheet No. 3 of 15 May 1984 received October 2, 1985.
6. Designo's Sheet No. 4 of 15 May 1984 received October 2, 1985.
7. Designo's Sheet No. 5 of 15 May 1984 received October 2, 1985.
8. Designo's Sheet No. 6 of 15 May 1984 received October 2, 1985.
9. Designo's Sheet No. 7 of 15 May 1984 received October 2, 1985.
10. Designo's Sheet No. 8 of 15 May 1984 received October 2, 1985.
11. Designo's Sheet No. 9 of 15 May 1984 received October 2, 1985.
12. Designo's Sheet No. 10 of 15 May 1984 received October 2, 1985.

TABLE 3-2. (CONTINUED)

13. Designo's Sheet No. 11 of 15 May 1984 received October 2, 1985.

14. Designo's Sheet No. 12 of 15 May 1984 received October 2, 1985.

15. Designo's Sheet No. 13 of 15 May 1984 received October 2, 1985.

16. Designo's Sheet No. 14 of 15 May 1984 received October 24, 1985.

17. Designo's Sheet No. 15 of 15 May 1984 received October 24, 1985.

18. Designo's Sheet No. GP-1 of 2 September 1985 revision 1 received October 24, 1985.

19. Designo's Sheet No. GP-2 of 2 September 1985 received October 2, 1985.

20. Designo's Sheet No. D1 of 2 revision 1 September 1985 received October 24, 1985.

21. Designo's Sheet No D2 of 2 September 1985 received October 2, 1985.

22. Designo's Cross-Section Drawing Sheet No. 1 of 31 through 31 of 31 and Borrow Areas Section 1 of 3 through Section 3 of 3 received October 2, 1985.

23. Designo's Sheet No. 1B of 3 Revision No. 1 May 22, 1985.

p. Department on April 19, 1985 and the supplemental information dated June 26, 1985 received by the Department on June 27, 1985, and waste analysis Plan Addendum Lime Neutralized Spent Liquor Pickle Testing Procedure submitted June 9, 1986, and received by the Department on June 10, 1986.

q. ABC Mfg. letter December 11, 1985 received December 12, 1985 and the following attachments:

1. Bill's Water Systems letter December 5, 1985 received December 12, 1985.

2. Frank's Plastic Testing, Inc. Laboratory report PVC Compatibility Test Results Report Date November 26, 2985.

TABLE 3-2. (CONTINUED)

r. ABC Mfg. letter April 26, 2985, received April 29, 2985 with attached liner information.

s. ABC Mfg. letter December 9, 1985 received December 10, 1985.

t. ABC Mfg. letter December 16, 1985 received December 18, 1985 and the following attachments:

1. Construction Quality Assurance Plan Impoundment No. 6 received December 18, 1985.

u. Brown letter October 25, 1985 with enclosed hardness test date for the HPDE test results under Condition J1.

v. Designo's letter November 4, 1985 received November 5, 1985.

w. Designo's Engineer Certification December 10, 1985.

Obtaining a map of the facility to be inspected may be the single most important piece of information an inspector can obtain prior to the site visit. A correctly prepared map should detail the site, inclusive of labels identifying regulated units, non-regulated units, and groundwater monitoring well locations. An example is presented in Figure 3-1. Types of information that can be determined from a map by the inspector when developing a checklist or information sheet include:

- o The location of all waste management units
- o The number of each type of management unit
- o The location of groundwater monitoring wells.

Often, a permit may reflect waste management units that are proposed or still under construction. Note in Figure 3-2 that exact locations for three proposed waste management units are presented. An inspector can determine unit operation status during his site visit.

At times, the map of the facility may not distinguish permitted versus unpermitted units. This information should be found in the initial pages of the permit. Other authorities will specify conditions, locations, and capacities of each individual unit in separate sections of the permit. For example, the container section of a permit may read:

Conditions Related Solely to Storage in Containers

1. The permittee is authorized to store the following maximum quantities of hazardous waste at the specified locations:

- o B-10 Storage Area -- 11,000 gallons
- o T-559 Storage Building -- 5,280 gallons
- o B-96 Road Storage Area -- 6,380 gallons.

* * * * *

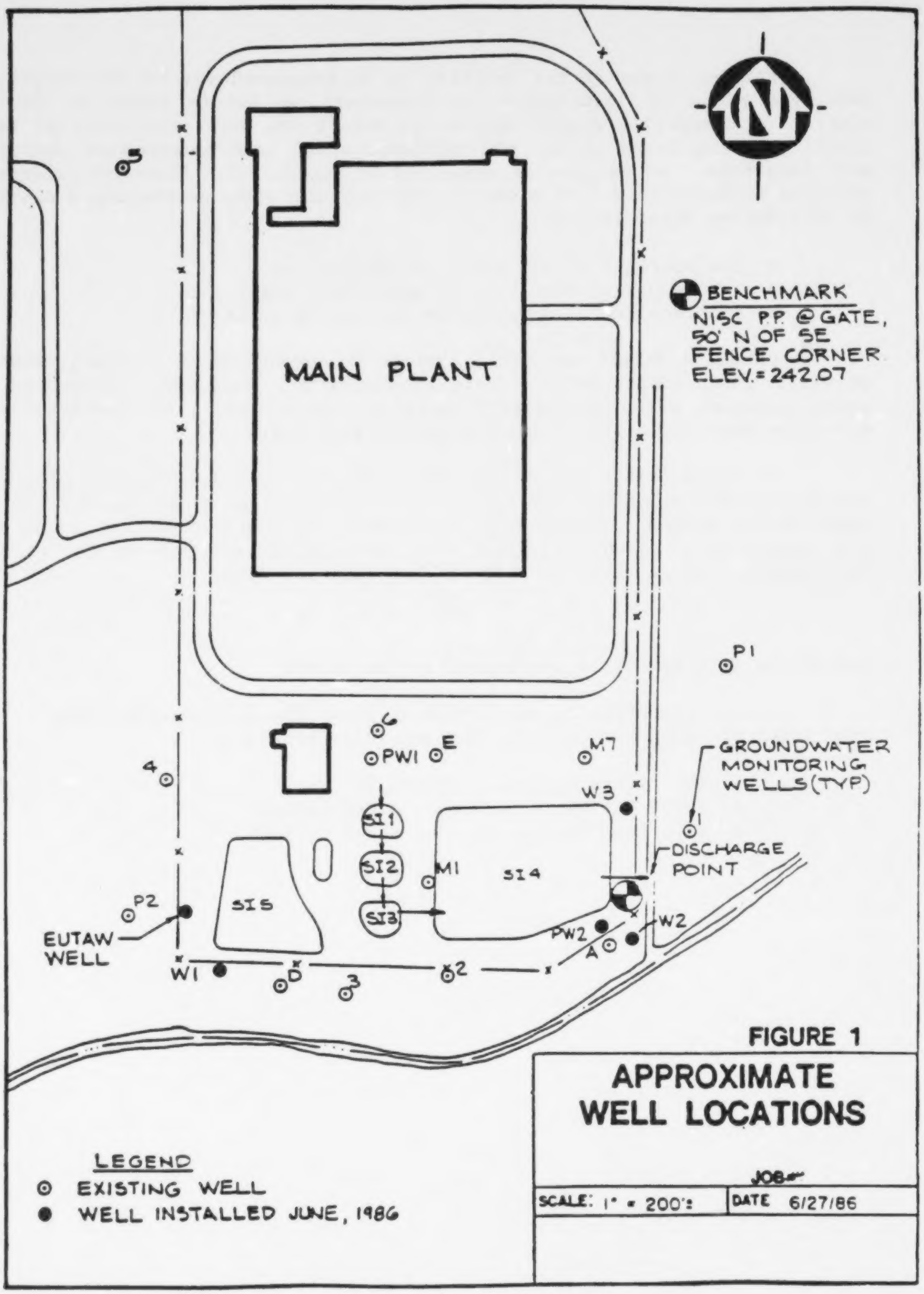
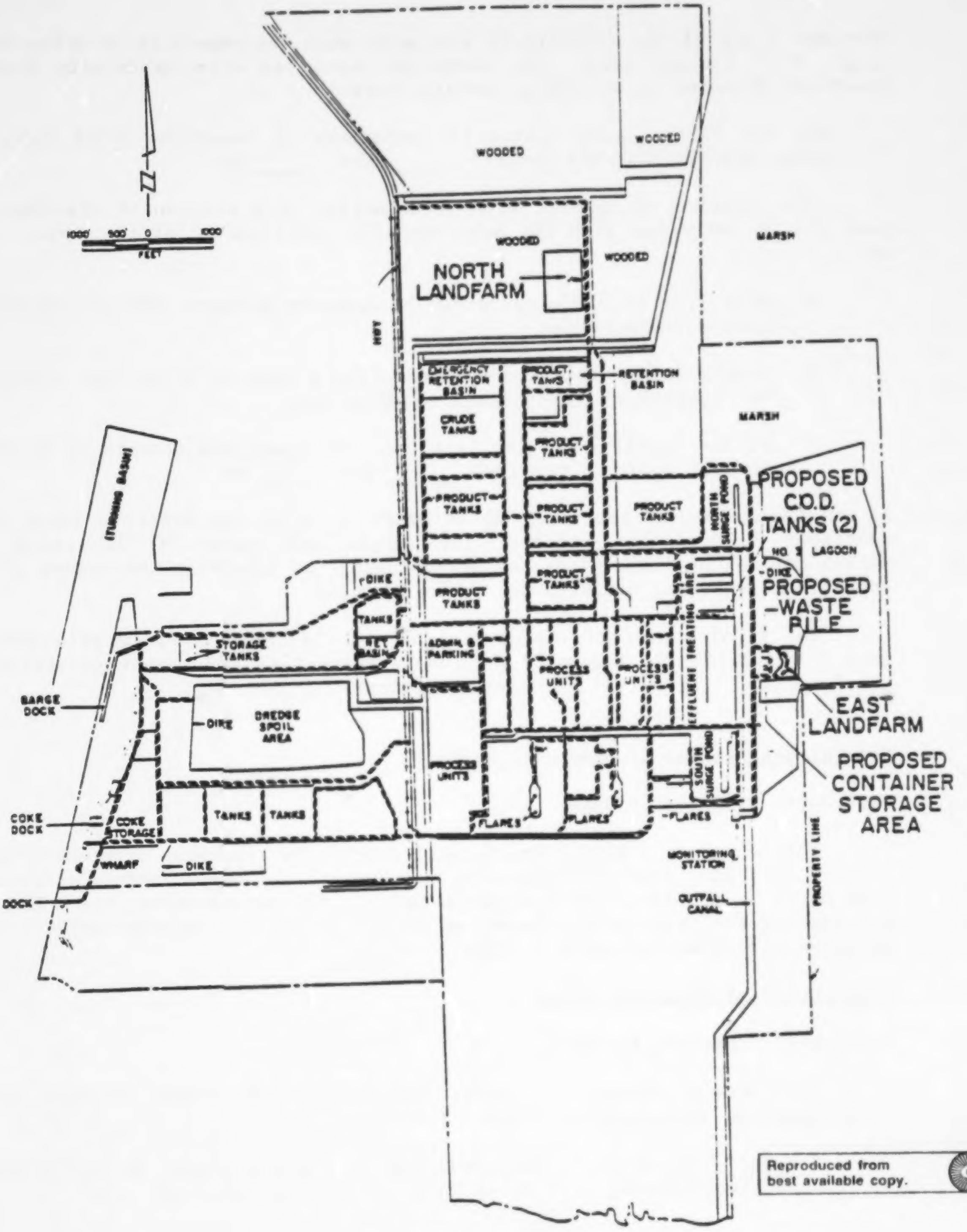

N
BENCHMARK
NISC P.P. @ GATE,
50' N OF SE
FENCE CORNER
ELEV.=242.07
MAIN PLANT
5
P1
6
PW1
E
M7
4
W3
GROUNDWATER
MONITORING
WELLS (TYP)
1
SI1
SI2
SI3
SI4
SI5
M1
DISCHARGE
POINT
P2
EUTAW
WELL
PW2
A
W2
W1
D
3
2
FIGURE 1
APPROXIMATE
WELL LOCATIONS
JOB #
SCALE: 1" = 200'±
DATE 6/27/86
LEGEND
⊙ EXISTING WELL
● WELL INSTALLED JUNE, 1986

FIGURE 3-1. SAMPLE MAP #1


N
1000' 500' 0 1000
FEET
WOODED
WOODED
WOODED
WOODED
MARSH
NORTH LANDFARM
HWY
EMERGENCY RETENTION BASIN
PRODUCT TANKS
RETENTION BASIN
CRUDE TANKS
PRODUCT TANKS
MARSH
PRODUCT TANKS
PRODUCT TANKS
PRODUCT TANKS
NORTH SURGE POND
PROPOSED C.O.D. TANKS (2)
NO. 3 LAGOON
PRODUCT TANKS
DIKE
PROPOSED WASTE PILE
(TURNING BASIN)
DIKE
PRODUCT TANKS
TANKS
EFFLUENT TREATING AREA
RET BASIN
ADMIN. & PARKING
STORAGE TANKS
PROCESS UNITS
PROCESS UNITS
EAST LANDFARM
BARGE DOCK
DIKE
DREDGE SPOIL AREA
PROPOSED CONTAINER STORAGE AREA
PROCESS UNITS
SOUTH SURGE POND
COKE DOCK
COKE STORAGE
TANKS
TANKS
FLARES
FLARES
FLARES
WHARF
DIKE
MONITORING STATION
DOCK
OUTFALL CANAL
PROPERTY LINE

Reproduced from best available copy.

FIGURE 3-2. SAMPLE MAP #2

Provided a map of the facility is available with corresponding location codes (e.g., B-10 Storage Area), the inspector should be able to develop several questions directed at verifying certain items:

Are any wastes being stored in containers in locations other than the three specified in the permit? _____ Yes _____ No

For purposes of general site orientation, this section of the protocol need not be concerned with the more specific requirements of the permit such as:

1. Four feet of aisle space may be required between rows of containers in the storage area.
2. Cracks larger than one inch deep and a quarter of an inch wide must be repaired within 24 hours of discovery.
3. Is the facility storing less than the specified amounts of wastes in each storage location? _____ Yes _____ No

An experienced inspector using an information sheet may detect a crack on a container storage pad, measure the length and depth of the crack and subsequent to the inspection, review the permit to determine the nature of any conditions requiring maintenance of storage pads.

The final aspect of the permit that should be reviewed to gain insight into the facility is the type of process operations and wastes generated at the facility. The permit may have conditions such as:

General Description of Hazardous Waste

Wastewater Treatment Sludge

This waste is a sludge which results from the treatment of process rinse waters (including some electroplating wastewater) and spent process solutions. This waste is stored in surface impoundments. ABC Manufacturing has submitted a delisting petition to the Bureau of Pollution Control for this waste. This petition was submitted April 7, 1986.

Description of Hazardous Waste

Wastewater Treatment Sludge

EPA Waste Number: F006 (Wastewater Treatment Sludges from Electroplating Operations)

General Description: this material is a black sludge as collected in the surface impoundments. It dries to a light to medium brown color.

Composition of the material:

Chromium	0.1-1.0%
Chromium (VI)	ND
Nickel	0.2-1.7%
Zinc	1-2%
Iron	5-9%
Aluminum	1-1.5%

The remainder of the sludge consists of excess lime, neutralization byproducts such as gypsum, and dirt, grit, and other insolubles from the manufacturing process.

This should trigger questions such as:

Is the electroplating sludge the only waste being discharged to the surface impoundment? _____ Yes _____ No

Has the Bureau of Pollution Control delisted the waste?
_____ Yes _____ No

In this instance, an inspector using an information sheet may only need to note the type of waste stored in the surface impoundment and the visual characteristics. A quick call to the Bureau of Pollution Control can determine the status of the waste and maybe turn up additional facility information not contained in the RCRA permit. During the site visit, the inspector can key into the process generating the waste, other wastes that may be entering the impoundment, waste transportation handling procedures, and other visual signs that may signify a problem.

For some industries, it is necessary to carefully examine the flow diagrams due to the unit-specific nature of the waste listing. In reviewing the information from a petroleum refinery, the inspector may notice that the facility does not report generating any K051 waste, although most refineries do generate K051. Examination of the flow diagrams may reveal that this facility is using a coalescing plate separator instead of the more widely used American Petroleum Institute separator. Although the sludges from both types of separators are similar in composition, only the API separator sludge is considered a listed waste.

In general, the orientation portion of the inspection is the inspector's procedure for learning the basics about the facility so that upon performing the inspection, any obvious or serious violations can be readily noted. Inspectors should be alert for unpermitted units, and transporter and generation activities at a mostly permitted facility.

3.3.2 Release Points

The purpose of the Resource Conservation and Recovery Act, the attendant regulations, and RCRA permits, is, in the most basic sense, protection of human health and the environment. Thus, the inspection of potential release points in an important aspect of an inspection protocol. Both actual and potential releases should be evaluated. RCRA Facility Assessments (RFAs) are an ideal reference for reviewing the actual and potential release points. Many aspects of RCRA permits make specific provisions for identifying and mitigating releases to the environment.

Many of these provisions reference potential releases associated with deterioration of management units. For example:

> Condition of Containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition. Any leakage shall be cleaned up immediately upon detection.

This condition is not easily inspected. The inspector cannot tell from this condition whether the Permittee has had problems with containers in the past. A second permit condition may aid in this determination:

The Permittee shall visually inspect the containers for degradation at least weekly and shall record the results of such inspections in the operating record.

Questions that should be asked by the inspector and are applicable for a checklist include:

Is the container storage area presently free of spills? cracks?
______ Yes _____ No

Do records indicate containers are inspected at least weekly?
_____ Yes _____ No

According to records, has the facility been free of spills? cracks?
_____ Yes _____ No

Again, note that questions have been worded such that problems are indicated with a negative response.

Warning signals to the inspector that may indicate a release or potential release from various units include: rusty or deformed containers, poorly stacked drums, puddles around units, leaking valves on tank, strong odors from encapsulated units, dead vegetation, erosion, dusty conditions around piles, or any other sign that may signal to the inspector that the unit is not containing the waste or is poorly managed thus significantly increasing the changes for a release.

Often times a determination of compliance with permit conditions cannot be made with a simple visual inspection. For example, a permit may read:

> "Pump all liquids out of the leachate collection and removal systems immediately after the Permittee determines liquids are present. "All liquids" means pumping out liquid so that only one inch remains in the collection system.
>
> Any leachate collection and removal system which generates more than 20 gallons of liquid in any calendar day shall immediately cease accepting wastes into the regulated unit. The permittee must notify the Director in writing any time this criteria is exceeded.
>
> The permittee is required to cease discharge of hazardous wastes into any surface impoundment and immediately implement emergency procedures whenever the level of liquids in the surface impoundment suddenly drops, and the drop is not known to be caused by changes in the flows into or out of the surface impoundment from normal operation."

While these permit conditions all indicate a release to the environment, the inspector needs to do more than simply "look" at the impoundment or landfill. When using an information sheet, an inspector may note that the leachate collection is not to exceed twenty gallons per day of liquid. An inspection checklist should include questions such as:

Does the facility maintain daily records of daily leachate quantities collected? ______ Yes ______ No

Do records indicate the facility has not exceeded releases of 20 gallons per day, every day? ______ Yes ______ No

If no, was notification of this event received by the Director? ______ Yes ______ No

Does the facility keep records of the liquid level in the surface impoundment? ______ Yes ______ No

Does the facility maintain records of "normal" flows in and out of the unit? ______ Yes ______ No

Do records indicate a sudden drop in liquid level?
______ Yes ______ No

Whether using the information sheet or the checklist, the inspector should be able to draw the same conclusions.

In certain circumstances, an inspector may not know a release unless some type of background levels are provided. For example, a permit condition may be:

Corrective Action Requirements

As required in 40 CFR 264.100(a) and 264.101, the Permittee shall conduct corrective action whenever the concentrations of the following hazardous constituents in groundwater are in excess of the concentration limits listed below along the compliance points (the downgrading boundary of each solid waste management unit).

Constituent	Concentration Limit	Basis
Creosote	Presence or absence	Background
Cresols (total of o,m, & p-cresol)	1750 ug/l	ACL
Naphthalene	MDL	Background
Pentachlorophenol	0.20 mg/l	ACL
Phenol	3.5 mg/l	ACL
Fluoranthene	0.21 mg/l	ACL
Chrysene	MDL	Background
2,4-Dimethylphenol	MDL	Background
2,3,4,6-Tetrachlorophenol	350 ug/l	ACl

This is a perfect inspection criterion provided the condition to analyze the groundwater on a regular basis is being met by the permittee. A summary of these permit conditions should be brought to the inspection so that a determination can be readily made onsite as to whether or not the facility is within groundwater limitations. The inspector should be careful to note the units (e.g., mg/l) in the permit conditions and verify that the permittee is using similar units, and if not, are these units comparable. For the previous permit condition, a daily analysis may be:

Constituent	Concentration
Creosote	Not Detected
Cresols (total of 0,m, fp - cresol)	3.5 mg/l
Naphthalene	Not Detected
Pentachlorophenol	0.02 mg/l
Phenol	2.1 mg/l
Fluoranthene	Not Detected
Chrysene	Not Detected
2,4-Dimethylphenol	Not Detected
2,3,4,6-Tetrachlorophenol	29 mg/l

At first glance, it may appear that the facility is in compliance, but upon closer inspection it is obvious that 2,3,4,6-tetrachlorophenol is significantly above the limit. The problem arises because units specified in the permit are different than the units specified in the analytical results. Another problem that may occur is the lack of specified units for groundwater pollutant limitations. It is vital for the inspector to pay close attention to this type of detail.

Do analytical procedures conform to permit conditions?
_____ Yes _____ No

Is the sample being collected at the location specified in the permit?
_____ Yes _____ No

3.3.3 Other Conditions

As discussed previously, the inspection checklist can cover any, or all, of the permit conditions. The purpose of this subsection is to provide examples of how to construct checklist questions that may be of value to the inspector. While the aim of the inspection is to assist in a noncompliance determination, it is not expected that the inspection will always result in making such determinations without further investigation. This section provides examples of how checklist questions may be fashioned for permit conditions, and explain how each question may provide useful to a compliance determination. Examples are provided for permit conditions in the following areas: waste analysis plan; unit-specific conditions for storage tanks; surface impoundments; closure; and corrective action.

Waste Analysis Plan

Each facility is required to submit a waste analysis plan as part of a Part B permit application which, when approved, becomes part of the facility's permit conditions. The plan characterizes hazardous wastes generated or handled by the facility, and outlines sampling procedures, analytical methods, constituents of concern and reporting requirements.

The inspector's discussions with the permit writer/enforcement official may reveal that sampling and analysis problems consistently arose during interim status. Past efforts revealed that the personnel conducting the tests, as well as the equipment used to conduct the tests, resulted in persistent problems. Consequently, the permit writer inserted the following permit conditions into the facility's waste analysis plan:

Sampling Personnel

The samples are taken under the direction of the Plant Environmental Chemist, who will keep a log of the samples and field notes (if any) in a bound notebook. Samples are labeled and numbered, then submitted to the laboratory with a sample request form. (The Environmental Chemist will have Bachelor of Science Degree in Chemistry. Present Environmental Chemist is Bill Jones, III, who has a B.S. degree in chemistry from the State University, plus seven years experience.)

Laboratory Personnel

All samples are submitted to Acme, Inc.'s Smalltown Plant Analytical Laboratory. All analysis are performed under the direction of the Plant Chemist whose requirements include a Bachelor of Science Degree in Chemistry. This position is currently held by Julia Smith, who has a Bachelor of Science degree in Chemistry from State College, plus seven years experience.

Analytical Equipment

The equipment used for the analyses performed for the Waste Analysis Plan is as follows:

Atomic Absorption Spectrophotometer - Perkin Elmer Zeeman 303 Model with HGA600 Perkin Elmer Graphite Furnace.

Printer - Perkin Elmer PR-100.

pH Meter - Fisher Accumet Model 325 or equivalent.

Balances - Various to cover weights from 0.0001 g up.

Service and Quality Assurance

(1) Rite Weight, Inc. - To service balances every six months. Includes test of scale deflection, precision, and accuracy of weight set.

(2) Perkin Elmer - To service AAS and Graphite furnace as necessary.

Note: Should Acme's laboratory for any reason, not be able to analyze the samples, they will be preserved and sent to a contract laboratory (currently Jones Laboratory, Inc.). Acme's laboratory, or any laboratory at which samples are to be analyzed, will conform to a Quality Assurance Program as follows.

For every analytical procedure, blanks, mid-point standards, calibration curves and duplicate analyses are included. Quarterly, reference standards are analyzed for all parameters in the Waste Analysis Plan, and Groundwater Monitoring Plan. The Laboratory follows quality control and quality assurance procedures very similar to those given in SW 846, July, 1982, 2nd Edition, Section 10.4. In addition, the Laboratory must participate in EPA's annual Quality Assurance Program under the National Pollutant Discharge Elimination System (NPDES).

The checklist questions that may be fashioned, and the rationale for fashioning them, are listed below:

Does the Plant Environmental Chemist have a BS or advanced degree in chemistry? _____ Yes _____ No

Does the Plant Chemist have a BS degree in chemistry? _____ Yes _____ No

If Bill Jones and Julia Smith remain the plant's chemists, their degrees have been previously verified and the correct response is "yes". Otherwise, the degrees of current personnel should be reviewed. While affirmative responses suggest compliance with this condition, the fact that employees hold chemistry degrees does not necessarily indicate that good sampling/analytical practices have been followed. Yet another checklist question can be fashioned from the permit conditions to get at this question. For example:

Does the facility have all the requisite equipment used to run the analyses performed for the waste analysis plan including:

o Perkin Elmer Zeeman 3030 Model Atomic Adsorption Spectrophotometer with HGA600 Perkin Elmer Graphite Furnace? ______ Yes ______ No

o Perkin Elmer PR-100 printer? ______ Yes ______ No

- o Fisher Accumet pH meter Model 325 or equivalent? ______ Yes ______ No

- o Balances to cover weights from 0.0001 g and up?
  Yes ______ No ______

Permit conditions also allow for checklist questions to be developed regarding maintenance of the equipment and quality assurance. For example:

Are balances serviced every six months? ______ Yes ______ No

However, the "as necessary" clause regarding AAs and Graphite furnace cannot be verified easily. Similarly, whereas the laboratory's annual participation in the NPDES Quality Assurance Program may be verified, the fact that the plant uses QA/QC procedures "very similar" to that which appear in SW-846 does not allow for easy inspection.

The previous questions may serve as rough indications of the adequacy of the facility's waste analysis plan. However, despite compliance with all of these conditions, the facility's waste analysis plan may be inadequate. For example, the balances may have needed servicing earlier than the routine six month period.

In some cases, the facility may be subject to certain requirements whether or not they appear in the permit. As discussed in Section 3.1.2, one source of additional requirements are the "self-implementing" regulations. Consider, for example, that the facility handles an F-solvent waste. It should be in a position to determine whether or not these wastes exceed land ban concentrations. Therefore, the facility should have equipment capable of conducting the TCLP test. Several questions may be fashioned to cover this concern. These appear in Table 3-3.

TSDF Unit Specific Conditions

Unit-specific permit conditions are established for each regulated unit at the facility. In developing these conditions, the permit writer considers: the minimum requirement in 40 CFR 264, site specific environmental factors, the wastes handled in the unit, and any potential problems identified at the facility. This section discussed the developing checklist items evaluating: 1) unit design, operation and maintenance; and 2) compliance with procedures and record keeping conditions. Examples of unit specific conditions, and the checklist questions derived from those conditions, appear below. Conditions for storage tanks and surface impoundments are considered.

Two separate permit conditions for storage tanks appear in Table 3-4.

TABLE 3-3. LAND BAN CHECKLIST QUESTIONS

Does the facility own/operate one of the following models of rotary agitation apparatus?

Company	Model	Yes	No
Associated Design and Manufacturing Company	4-vessel device	___	___
Lars Lande Manufacturing	10-vessel device	___	___
	6-vessel device	___	___
IRA Machine Shop and Laboratory	15-vessel device	___	___
EPRI Extractor	6-vessel device	___	___

Does the facility own/operate one of the following zero-headspace extractor vessels?

Company	Model No.	Yes	No
Associated Design and Manufacturing Company	3740-ZHB	___	___
Millipore Corporation	SD1P581C5	___	___

Does the facility own/operate one of the following filter holders?

Company	Model	Size (millimeter)	Yes	No
Nuciepore Corporation	425910	142	___	___
	410400	47	___	___
Micro Filtration Systems	302400	142	___	___
Millipore Corporation	YT30142HW	142	___	___
	XX1004700	47	___	___

Does the facility own/operate suitable filter media?

Company	Model	Pore Size	Yes	No
Whatman Laboratory Products	GFF	.7	___	___

TABLE 3-4. EXAMPLE PERMIT CONDITIONS: STORAGE TANKS

The Permittee shall install an activated carbon filtration system to the vents of the 3010 tanks. A manifold system may be used to connect the vents from each of the tanks in order to treat vapors from all of the tanks with a single filter. The activated carbon filtration system shall be either a Calgon VentSorb or Calgon High Flow VentSorb Canister system. The Permittee shall replace the activated carbon filtration system in accordance with manufacturer's recommendations or when analytical results indicate that the system has become saturated or otherwise ineffective.

The Permittee shall maintain at least six inches of freeboard (headspace) in the Laboratory Holding Tank at all times. This distance (six inches) shall be measured downward from the bottom the overflow drain pipe, which is indicated as Item 2 in Attachment 13, Figure D.3-5. The Permittee shall set the liquid level switch alarm system to be activated so that the specific freeboard (headspace) limit is not exceeded.

Visual inspection of storage tank should enable the inspector to answer:

Has the facility installed either a Calgon Ventsorb or Calgon High Flow Ventsorb Canister System to the vents of the 3010 tanks?
_____ Yes _____ No

It is more subjective to determine whether the Permittee has maintained the system by replacing the filtration system ". . . when analytical results indicate that the system has become saturated or otherwise ineffective". In this case the inspector will want to examine records regarding routine maintenance of the system as well as examine analytical data.

The inspector may also measure the freeboard in the tank, and examine and test the alarm system. Consequently, reasonable checklist items may include:

Does the permittee maintain at least a six inch freeboard in the laboratory holding tank at all times? _____ Yes _____ No

Is the switch and alarm system set and activated to ensure that this limit is not exceeded? _____ Yes _____ No

Table 3-5 lists some example conditions for surface impoundments.

The permit mandates that surface impoundments P-12 and P-16 cannot accept wastes after November 8, 1988. If an inspection is conducted after that date a question may be:

Are units P-12 and P-16 continuing to receive wastes? _____ Yes _____ No

Visual inspections may serve to determine whether or not the waste continues to be placed in the impoundments. However, records will need to be reviewed to determine whether wastes have been placed in the unit in the interim period between the inspection and November 8, 1988. In addition, questions should be fashioned from Section II.J and Attachment 8 to determine whether closure is proceeding on schedule.

The inspector may also review whether or not the permittee is recording data on a daily basis:

Has the permittee monitored and recorded on a daily basis the presence and volume of liquids in the leachate detection, collection, and removal system sumps? _____ Yes _____ No

The inspector should review the data for trends and fluctuations to evaluate the need for further investigation or as a flag during future inspections. The inspector may question appropriate plant personnel about any inexplicable data points and note responses.

TABLE 3-5. EXAMPLE PERMIT CONDITION: SURFACE IMPOUNDMENTS

This permit condition defines the five evaporation impoundment units at the facility and specifies that units P-12 and P-16 will be removed from service by November 8, 1988. The liner systems of units P-12 and P-16 do not meet the requirements of the minimum technology standards (Section 3004(o) of HSWA). The Permittee did not apply for a waiver of the requirement to retrofit these impoundments to meet the minimum technology standards. Consequently, these units cannot receive waste after November 8, 1988 and closure of these units must proceed on the schedule specified in Section II.J. and Attachment 8 of this permit.

> "The Permittee shall monitor for and record on a daily basis the presence and volume of liquids in the leachate detection, collection and removal system sumps during the active life of the units (including the closure period), and at least weekly during the post-closure period."

> "The Permittee shall, within 45 calendar days of detecting increase of greater than 50 percent above the preceding weekly average leakage rate, submit to the Director and the Administrator a report on the leakage."

By examining the daily records for leachate generation, the inspector can determine weekly average leakage rates allowing for a response to:

Has the average leakage rate for any week ever exceeded the previous week's average by more than 50 percent. ________ Yes ________ No

In addition, while conducting inspection planning activities in the office, the inspector should have noted whether the Director had been informed of any such occurrences and, if so, when. If such an event is discovered by the inspector in reviewing the facility's records, the inspector should determine:

Did the permittee submit the required report of this event to the Director within 45 calendar days? ________ Yes ________ No

Corrective action conditions may be verified on the basis of results and/or reports, such as progress reports. Examples of corrective action conditions for a land disposal unit are listed in Table 3-6. The permit condition identifies those constituents and associated maximum concentration limits which the permittee must monitor for to determine whether corrective action is required. Prior to the inspection the inspector should review all available reports regarding corrective action progress and related permit modifications (or applications) to determine the current status of operations. Checklist questions might include whether all constituents are measured at the listed concentration limits. The inspector may also design a question directed at whether the appropriate statistical test was used. For example:

Does the permittee make use of the Behrens-Fisher Student's t-test? ________ Yes ________ No

If No, did the Regional Administrator approve the use of an equivalent test? ________ Yes ________ No

In addition, the inspector may want to independently determine whether the ground water protection standards were exceeded by applying the approved statistical technique. If this inspection is the first inspection after commencement of the action, the checklist questions may focus on the proper establishment and placement of pumping wells. For example:

Was a pumping well established at grid coordinates (X15, Y12)? ________ Yes ________ No

Other questions may involve compliance with reporting requirements. A more comprehensive inspection would involve sampling and analysis to independently verify the accuracy of the permittee's reports.

The information provided in Chapter provides both suggestions and recommendations on procedures for developing permit specific TSDF inspection plans. While the discussion is brief, the tools introduced should allow inspectors to focus their efforts and make a ready transition between the interim status based inspections, and those based on permit specific requirements.

TABLE 3-6. CORRECTIVE ACTION CONDITIONS

Groundwater shall be removed [at all locations] where hazardous wastes, hazardous constituents or breakdown products have entered the groundwater from a solid waste management unit, as required under 40 CFR §264.101.

Corrective Action Requirements

The Permittee shall conduct corrective action whenever the concentrations of the following hazardous constituents in groundwater are in excess of the concentration limits listed below along the compliance points (the downgradient boundary of each solid waste management unit).

Constituent	Concentration Limit	Basis
Creosote	Presence or absence*	Background
Cresols (total of o,m & p-cresol)	1750 ug/l	ACL
Naphthalene	MDL	Background
Pentachlorophenol	0.20 mg/l	ACL
Phenol	3.5 mg/l	ACL
Fluoranthene	0.21 mg/l	ACL
Chrysene	MDL	Background
2,4-Dimethylphenol	MDL	Background
2,3,4,6-Tetrachlorophenol	350 ug/l	ACL
P-chloro-m-cresol	MDL	Background
2,4-Dichlorophenol	105 ug/l	ACL
2,4,6-Trichlorophenol	MDL	Background
Benzo (k) fluoranthene	MDL	Background
Benzo (b) fluoranthene	MDL	Background
2,4-Dinitrophenol	70 ug/l	ACL

The Permittee must use the Behrens-Fisher Student's t-test or an equivalent statistical test approved by the Regional Administrator to determine if concentrations exceed groundwater protection standards of this permit.

The analytical method and the minimum detection limit (MDL) for each constituent must be designated in all reports of analyses.

If the Permittee identifies additional Appendix VIII constituents, he shall:

a) Re-sample the affected well(s) within thirty (30) days;

b) Notify the Regional Administrator in writing within seven (7) days if the presence of additional constituents are confirmed;

---

*Determine presence or absence as described in Appendix III of 40 CFR Part 261.

TABLE 3-6. (CONTINUED)

c) Within sixty (60) days submit to the Regional Administrator, a determination whether there is a statistically significant increase above the background. The Behrens-Fisher Student's t-test or an equivalent statistical test approved by the Regional Administrator shall be used to determine a statistically significant increase.

d) If a significant statistical increase is determined, the Permittee must submit to the Regional Administrator an application for a permit modification to make any appropriate changes to the program.

Corrective Action Pumping

The well at grid coordinates (X15, Y12) shown on Figure 1 shall be installed initially to extract the plume of contamination migrating from the sludge pits, as required under 40 CFR §264.100(b) and §264.101. Additional extraction wells shall be installed within 180 days of determination by the Permittee or EPA that the initial extrication well system is not extracting the entire plume. The Permittee shall comply with all other State and Federal laws regarding treatment and discharge of the extracted water. The well shall be pumped at a maximum well yield until Condition II.C.1 are met.

Time Period for Implementation

Under 40 CFR §264.100(c) and §264.101, the Permittee shall commence corrective action no later than twenty-four (24) months after the effective date of the permit.

The Permittee shall submit a compliance schedule progress report to the Regional Administrator describing progress on implementation of corrective action no later than fourteen (14) days from the first anniversary of the effective date of the permit.

Corrective Action Monitoring

The Permittee shall monitor the effectiveness of corrective action on groundwater quality and groundwater flow across the entire extent of the contamination plume emanating from the sludge pits, as required under 40 CFR §264.100(d) and §264.101

The corrective action monitoring shall commence on the effective date of the permit with quarterly monitoring in the following wells for the hazardous constituents listed in II.C.1.

WC-7 WC-21
WC-14 WC-13 (background)

Chapter Four

Conducting the Inspection

SECTION	PAGE
4.1 FACILITY ENTRY	4-3
Arrival	4-3
Consent	4-4
Denied Access	4-5
Use of a Warrant to Gain Access	4-6
Conducting an Inspection Under a Warrant	4-8
Dealing with Threats	4-8
4.2 OPENING DISCUSSION WITH OWNER/OPERATOR	4-9
4.3 OPERATIONS, WASTE HANDLING, AND RECORD REVIEW	4-13
Generators, Transporters, and Interim Status TSDFs	4-14
Permitted Facilities	4-19
4.4 GENERAL PROCEDURES	4-21
Use of Inspection Checklists	4-23
Determining the Need for Sampling and Identifying Sampling Points	4-23
Observations for Follow-up Case Development	4-25
4.5 DOCUMENTATION	4-27
Field Notebook	4-27
Checklists	4-28
Photographs	4-28
Maps and Drawings	4-29
4.6 CLOSING DISCUSSION WITH OWNER/OPERATOR	4-31

4.1

Facility Entry

The authority to conduct inspections is contained in Section 3007(a) of RCRA and is reproduced verbatim in Section 1.5 of this manual. Section 3007(a) grants authority to an inspector to enter the premises of anyone who "generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous wastes" and to access all records pertaining to such wastes.

Inspections are either announced or unannounced, as discussed in Section 2.6. In an announced visit, the facility is contacted and advised of the forthcoming inspection prior to the inspector's arrival. In unannounced visits, no notice is given before the inspector's arrival on site.

The responsibilities of the inspector in conducting the inspection have been discussed in Section 1.5. Briefly, the inspector must:

- Enter the premises at a reasonable time and complete the inspection as promptly as possible.
- Issue receipts for samples collected.
- Provide duplicate samples.
- Furnish the owner, operator, or agent a copy of any sample analysis conducted.

Arrival

The inspector should determine the appropriate time of entry. Inspections must be conducted at a reasonable time or during normal working hours. Inspections that cannot be completed before the normal close of business will continue on the next business day, unless management does not object to completing the inspection after closing time (if the time needed to complete the inspection is short). If the facility is open continuously, or if management leaves before operations stop, the inspection may continue at the inspector's discretion. In any event, the inspection should be completed in a timely manner.

Preceding page blank

Upon arrival, the inspector should:

- o Locate the proper official (owner, operator, or agent) as soon as possible and determine that this official has the proper authority to help you.
- o Present identification to the proper officials, even if it is not requested. Keep identification in sight at all times while trying to locate the proper officials.
- o Document entry in logbook or field notebook, noting date, time, and the names and titles of facility personnel encountered.

Generally, proper identification consists of the inspector's EPA or State agency identification card, as issued by the respective agencies, and any additional identification required by EPA Regional or State policy. The inspector should familiarize him/herself with applicable Regional or State policy on identification requirements.

Inspectors may be requested on arrival to sign a log, passbook, waiver, or other form prior to entering a facility. In general, inspectors may sign logs or passbooks; they are used by facilities to keep a record of visitors to the facility and are useful in the event of a fire or other emergency. Inspectors should not sign waivers or other legal documents where the purpose is to limit the facility's liability in the event of an accident. Additionally, inspectors should not sign other legal documents limiting the inspector's rights or the owners responsibilities while at the facility.

Consent

The owner or agent in charge at the time of the inspection gives consent to inspect the premises.

The inspector should be aware that the consent to inspect may be withdrawn at any time. However, any segment of the inspection completed before such withdrawal remains valid. Withdrawal of consent is equivalent to a refused entry. A warrant must be secured to complete the inspection. Refusal of entry and use of a warrant to obtain entry are discussed in the following sections.

Consent to site entry is not required for an inspector to observe and report on things in plain view (i.e., anything that a member of the public could be in a position to observe). This includes observations made while on private property in areas not closed to the public (e.g., matters observed while the inspector presents identification).

During an inspection, it is possible that an owner/operator would try to limit the inspector's access to portions of the facility. Limiting access to portions of the facility is similar to being denied access to the facility. The appropriate response to being denied access is discussed in the following sections.

Denied Access

An inspector may be denied access for several reasons, some of which may be valid. For example:

- The inspector does not have the safety equipment required by the facility (per OSHA or NIOSH requirements).

In these cases, it is generally possible to obtain access (usually on another day) by satisfying the owner/operator's objection (e.g., by returning on another day with the required safety equipment). A warrant is not usually necessary to obtain access in these cases.

Other reasons for denial of access will not be valid. In this case, a warrant may be obtained to conduct the inspection. Some invalid reasons for denial include:

- Not allowing the inspector to bring in necessary equipment (e.g., camera).
- Not allowing the inspector access to documents.
- Strikes and/or plant shutdowns.
- The inspector refuses to sign a waiver or other legal document restricting the owner/operators liabilities or obligations.

When an inspector is denied access, the following procedures apply:

- Ask the reason for denial.
- If the problem is beyond the inspector's authority, suggest that the official contact an attorney to obtain legal advice on his/her responsibility under §3007 of RCRA.
- Under no circumstances should the inspector discuss potential penalties or do anything that might be construed as threatening.
- If access is still denied, fill out a "Denial of Access Report" (Exhibit 4.1.) with the time, date, and names and titles of persons denying access. Obtain the signature of the facility representative if possible.
- Leave the premises and document any observations made pertaining to the denial, particularly any suspicions of violations.

- Report all aspects of denial of access to the appropriate Regional or State enforcement division to determine appropriate action to be taken and to get help in obtaining a search warrant.

- A Federal or State enforcement division attorney should assist the inspector in preparing the documentation necessary to obtain a search warrant and will arrange for a meeting with the inspector and a U.S. or State Attorney. The inspector or attorney will bring a copy of the appropriate draft warrant and affidavits to the meeting.

- For Federal inspections, the enforcement division attorney will inform the appropriate EPA Headquarters enforcement attorney or equivalent of any entry refusals and will forward copies of all papers filed.

- The attorney will then secure a warrant and forward it to the inspector and/or to the U.S. Marshall or equivalent State law enforcement authority.

Use of a Warrant to Gain Access

Inspectors should keep the following points in mind while seeking access to a facility under a search warrant:

- A U.S. Marshall or local law enforcement officer should accompany the inspector if the probability is high that entry will still be refused, or if there are threats of violence by the owner/operator.

- An inspector should never attempt to make forceful entry into a facility.

- If entry is refused with the warrant and the inspector is not accompanied by a U.S. Marshall or local law enforcement officer, the inspector should leave the facility and inform the enforcement division attorney.

EXHIBIT 4-1. DENIAL-OF-ACCESS REPORT

DENIAL-OF-ACCESS REPORT

On ________________ at ________________ I was denied access into

____ at ____________________
Facility Location

by ____
Facility Representative's Name and Title

for the following reason(s):

List here:

1. ____
2. ____

____
Signed/Inspector

____
Signed/Facility Representative

The facility representative, __________________________, has refused
Name
to sign this Denial-Of-Access Report. (________________, ____________.)
Date Time

Conducting an Inspection Under a Warrant

The procedures for conducting an inspection under a search warrant will differ from those for conducting an inspection under normal circumstances. The procedures are as follows:

- The inspection must be conducted in strict accordance with the warrant. If the warrant restricts the inspection to certain areas or to certain records, the inspector must adhere to these restrictions.
- If sampling is authorized, all procedures must be carefully followed, including presentation of receipts for all samples taken. The facility should also be informed of its right to retain a portion of the samples obtained by the inspector.
- If records or property are authorized to be taken, the inspector must provide receipts and maintain an inventory of all items removed from the premises.

Dealing With Threats

The receptiveness of facility officials to an inspection will vary from firm to firm. In, general, most inspections proceed without difficulty. However, in some cases, inspectors may be threatened by facility representatives when trying to obtain entry to the facility or during the course of an inspection (e.g., when trying to obtain access to a particular portion of the facility).

The inspector should determine the appropriate course of action for managing the threat based upon the nature of the threat and the actions of facility officials. If threatened with violence, the inspector should terminate the inspection and follow procedures presented in the section titled "Denied Access". In such cases, the inspector should not return to the facility except if accompanied by a U.S. Marshall or local law enforcement officer. It will probably be necessary to obtain a warrant in these cases.

Threats which do not involve a threat of physical harm to the inspector (e.g., a threat to call the inspector's supervisor) generally will not require the inspector to terminate the inspection unless accompanied by consent withdrawal or access denial by the owner/operator, in which case the relevant procedures discussed in previous sections should be followed. Threats should be noted in the field log.

Inspectors themselves should avoid making any statements to facility representatives which could be construed as threatening or inflammatory.

4.2

Opening Discussion With Owner/Operator

When the proper facility authorities have been located and identification has been presented, the inspector may discuss inspection plans with the facility officials. This meeting has several purposes:

- To outline inspection objectives. This will inform facility officials of the purpose and scope of the inspection and may help to avoid misunderstandings.
- To provide management with information on RCRA. During the initial inspection, the inspector may wish to discuss the provisions of RCRA with the manager and furnish a copy of the Act. The inspector is regarded as a source of regulatory information and can help strengthen Agency-industry relations.
- To establish the order of the inspection. A discussion of the order in which operations will be inspected will help to eliminate wasted time by allowing officials time to make records available and to start up intermittent operations.
- To establish meeting schedules. A schedule of meetings with key personnel will avoid time wasted in waiting for people to become available. The inspector should try to obtain business cards of all persons interviewed during the inspection.
- To arrange for facility personnel to accompany the inspector. During compliance inspections, it is helpful if a facility representative accompanies the inspector to explain operations and to answer questions.
- To set up a closing conference. A wrap-up meeting should be scheduled with appropriate officials to provide a final opportunity to gather information, to answer questions, and to complete administrative duties.

- To advise management of the availability of duplicate samples. The facility has a right to request and receive immediately duplicates of any samples collected for laboratory analysis during the inspection as well as copies of the analysis results later (if an enforcement case is not pending or being pursued).

- To discuss new requirements. The inspector should discuss any new rules and regulations that might affect the facility and answer questions pertaining to them.

- To gather general information. Any necessary general information, such as the name and address of the chief executive officer of the facility, should be obtained during this meeting.

- To ascertain whether the owner/operator is going to claim any information as confidential business information. The owner/operator should inform the inspector if and when information is confidential. Direct questions such as: Do you want to make any CBI claims? may lead the owner/operator to get nervous and claim CBI unnecessarily. If the owner/operator does make that claim the inspector should provide the appropriate forms for making a claim of confidentiality.

Holding the opening discussion immediately after receiving access to the facility may not be appropriate in all cases. Depending upon the objective of the inspection, the inspector may want to see particular operations or locations in the facility prior to the opening discussion. For example, in an unannounced inspection of a facility with a suspected violation, the inspector may want to go directly to the site of the suspected violation in order to observe the violation before the owner/operator can stop, conceal, or otherwise obscure the non-complying operation or condition.

It is important that during the opening discussion, if one is held, or other initial discussion with the owner/operator (e.g., while walking to the location of a suspected violation), the inspector establish control of the inspection in a firm, professional manner. While inspectors should, if possible, avoid causing undue disruptions of facility operations (unless such disruptions are required to achieve the goals of the inspection), the inspector should remember that he or she is in charge of the inspection. Inspectors should not let the facility representative steer the course of the inspection.

From the opening discussion on throughout the inspection, the inspector should consider him- or herself to be an investigative reporter trying to find information that shows that the facility is not complying with the regulations. Inspectors should question, question, and question some more. If inspectors are diligent in questioning facility personnel and in observing operations, they will be able to discern almost any inconsistencies in what they see, hear, and have previously reviewed, that may indicate a violation.

Inconsistencies must be pursued until they are resolved. For example, if a facility is using a commercial solvent that would generate a listed waste, but does not report that it is generating that waste, the inspector should determine what's happening to the solvent. Where is the solvent used in the plant? Is it all consumed during use? Is the facility representative's explanation plausible, and is it consistent with the inspector's observations and knowledge? The inspector should pursue inconsistencies until he or she is satisfied that they either constitute a violation, or do not.

4.3
Operations, Waste Handling, and Record Review

The inspector should have the facility representative describe facility operations and waste management practices following the opening discussion. In general, the inspector should be familiar with the facility through previous review of the facility's file. Therefore, the purpose of this discussion will be to:

- Obtain a more detailed understanding of operations.
- Answer any questions the inspector may have on waste generation, waste flow, and waste management activities.
- Identify any changes in operating and/or waste management practices.
- Identify and reconcile any discrepancies between the operations described by the facility representative and those described in the facility file.

During this discussion, the inspector should prepare waste information sheets (included in Appendix IV) on each waste managed at the facility.

After discussing facility operations and waste handling practices, inspections usually proceed to the record review. The record review provides the inspector with the opportunity to become thoroughly familiar with the facility (e.g., through review of the operating record) and formulate specific questions to be investigated during the visual inspection of the facility. However, the record review does not have to occur before the visual inspection. In some cases, inspection objectives may be best served if the visual inspection occurs before the record review, or the visual inspection may be performed first for other reasons (e.g., availability of facility personnel or weather conditions).

Section 3007 of RCRA states that the regulated community shall furnish or permit inspectors "to have access to, and to copy all records relating to [hazardous] wastes". The regulated community must address administrative requirements for manifests, recordkeeping, and reporting; and hazardous waste facilities must comply with technical requirements mandating plans for waste analysis, training, contingency procedures, groundwater monitoring, and closure.

Preceding page blank

Generators, Transporters, and Interim Status TSDFs

During the Interim Status period, RCRA inspectors are responsible for reviewing all recordkeeping as required by §§ 262.40, 263.22, 265.74, and 270.10. Although no standard format is required, inspectors should check for 1) the presence of required records or plans, 2) dates of the documents (whether they are being kept up to date and/or maintained for the required period), and 3) any suspected falsification of data.

The regulatory requirements under Parts 262, 263, and 265 and 270 mandate that the following records be maintained by the regulated parties:

1) Part A Permit Applicants (interim status TSDFs):

    - 270.10 - Data used to complete permit applications.

    - 270.30 - Records of all monitoring information.

2) Generators:

    - 262.34 - Job titles and personnel records, agreements with local authorities, and contingency plan.

    - 262.40 - Manifests, biennial reports, exception reports, and waste analyses and test results (or other basis for determining a waste is hazardous and its classification).

3) Transporters:

    - 263.22 - Manifests, shipping papers for bulk shipments by rail or water, and manifests for foreign shipments.

4) Treatment, Storage and Disposal Facilities:

    - General facility standards, including the following:

        265.13 - Waste analysis plan
        265.15 - Inspection schedule
        265.16 - Job titles and personnel records
        265.51,53 - Contingency plan
        265.71-77 - Manifest system (records of manifests)
        265.73 - Operating record
        265.93 - Outline of ground-water monitoring plan
        265.94 - Ground-water monitoring record
        265.112 - Closure plan
        265.118 - Post-closure plan.

- Facility-specific standards, including the following:

  265.193(i) - Annual assessment for tanks
  265.196(f) - Certification of major repairs
  265.197(2) - Contingent post-closure plan
  265.279 - Land treatment, requirements for operating record and closure plan
  265.309 - Landfills, requirements for operating record, contents and organization of cells, and closure plan
  270.30 - Permits, requirements for monitoring information (Subparts F & G).

- Required submittals to the Regional Administrator (see Exhibit 4-2).

While performing a record review in accordance with the respective generator, transporter, and interim status regulations, the inspector may encounter problems in accurately interpreting the regulations. Therefore, the Agency has made available a number of guidance documents and lists of background documents that will aid both the inspector and the regulated community to comply with the recordkeeping requirements of Subtitle C. Exhibit 4-3 presents a list of some of these references; a complete catalog of background documents can be obtained from the RCRA-Superfund Hotline.

EXHIBIT 4-2. REQUIRED SUBMITTALS TO THE REGIONAL ADMINISTRATOR

Section 265.11	EPA identification number.
Section 265.12	Notice of date of arrival of hazardous waste from a foreign source.
Section 265.56	In cases of releases, fires, or explosions, notification by emergency coordinator that an affected area is adequately cleaned up before operations are resumed.
	Written report by emergency coordinator on emergency incident within 15 days of incident.
Section 265.72	Manifest discrepancy report within 15 days of receipt of waste.
Section 265.74	Upon closure, copy of records of waste disposal locations and quantities.
Section 265.75	Biennial report.
Section 265.93	In cases of confirmation of analyses indicating significant increase (or pH decrease), a written notice that the facility may be affecting ground-water quality within 7 days of date of such confirmation.
	Within 15 days after above notification, specific plan for a ground-water quality assessment program at the facility.
	After determination of the above ground-water quality assessment, written report containing an assessment of ground-water quality and/or indicating a reinstatement of the indicator evaluation program.
Section 265.94	Recordkeeping and reporting: ground-water monitoring information as specified in this section.
	Annual reports of Section 265.75 contain results of groundwater quality assessment program.
Section 265.115	Certification of closure.
Section 270.110	Permit application and amendments.

EXHIBIT 4-3. EPA GUIDANCE AND BACKGROUND DOCUMENTS FOR SUBTITLE C

1. Regional Guidance Manual for Selected Interim Status Requirements (Draft), Pub. No. PB81-184 988, May 1, 1980.

Section on Plans Recordkeeping, including sample waste analysis plan, contingency plan, ground-water assessment plans, and operating record.

2. Final Draft Guidance for Subpart G of the Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Pub. No. PB87-193 397, November 15, 1981.

3. Method for Determining the Compatibility of Hazardous Waste, Pub. No. EPA 600-2/80/076, 1980.

4. RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, OSWER Directive No. 9950.1, 1985.

5. Background Documents. Sixteen background documents developed by the Agency to explain and respond to comments on the Phase I rules, each corresponding to a Section of the Subpart. List of background documents is as follows:

   a. Purpose, Scope, and Applicability (including general issues concerning Interim Status Standards), Pub. No. PB81-181 414, April 15, 1980.
   b. General Waste Analysis Requirements, Pub. No. PB81-181 406, April 29, 1980.
   c. Security, Pub. No. PB81-181 398, April 15, 1980.
   d. General Inspection Requirements, Pub. No. PB81-190 001, Apr.15, 1980.
   e. Personnel Training, Pub. No. PB81-181 380, April 15, 1980.
   f. Preparedness and Prevention, Contingency Plans, and Emergency Procedures, Pub. No. PB81-181 372, April 15, 1980.
   g. Manifest System, Recordkeeping, and Reporting, Pub. No. PB81-190 043, April 15, 1980.
   h. Interim Status Standards for Ground-Water Monitoring, Pub. No. PB81-189 79, May 20, 1980.
   i. Interim Status Standards for Closure and Post-Closure, Pub. No. PB181-189 763, December 15, 1980.
   j. Interim Status Standards Financial Requirements, Pub. No. PB81-1899 326, January 15, 1981.
   k. Interim Status Standards for Tanks, Pub. No. PB81-190 050, December 15, 1980.
   l. Interim Status Standards for Surface Impoundments, Pub. No. PB81-185 001, April 15, 1980.
   m. Interim Status Standards for Land Treatment, Pub. No. PB81-190 068, April 15, 1980.
   n. Interim Status Standards for Landfills, Pub. No. PB81-189 789, February 15, 1981.
   o. Interim Status Standards for Incinerators, Pub. No. PB81-190 092, December 15, 1981.

EXHIBIT 4-3. (CONTINUED)

p. Interim Status Standards for Thermal Treatment, Pub. No. PB81-189 771, April 15, 1980.

These documents can be obtained from EPA Regional Office libraries, at EPA Headquarters library, or from Solid Waste Information, U.S. EPA, 26 West St. Clair Street, Cincinnati, Ohio 45268.

5. Reference Manuals. A series of design and operation manuals being prepared by the agency to assist facility owners and operators and regulatory officials. Manuals on the following topics have or will be completed by the Agency:

a. Training
b. Ground-Water Monitoring
c. Air Monitoring
d. Financial Responsibility
e. Containers
f. Tanks
g. Surface Impoundments
h. Waste Piles
i. Land Treatment
j. Landfilling
k. Incineration
l. Thermal Treatment
m. Chemical, Physical, and Biological Treatment

A catalog of these technical guidance documents is available from the RCRA-Superfund Hotline, Pub. No. EPA/530-SW-87-016A.

These documents also will be available through Solid Waste Information, U.S. EPA, 26 West St. Clair Street, Cincinnati, Ohio 45268, through EPA Regional libraries, or from the National Technical Information Service (NTIS).

Permitted Facilities

Permitted facilities have recordkeeping requirements under 40 CFR 264 similar to those that apply to interim status facilities under 40 CFR 265. The format and content of many of these records is specified in the facility permit (in most cases by incorporating the document into the permit) and changes to the format and content require modification of the permit. Modifications must be approved by the EPA Regional office or the State. Records or documents which are incorporated in the permit may include the following:

- 264.13 - Waste analysis plan.
- 264.15 - Inspection schedule.
- 264.16 - Personnel training program.
- 264.51, 264.52 - Contingency plan.
- 264.112 - Closure plan.
- 264.118 - Post-closure plan.

Other records or submittals which are not incorporated in the permit must be maintained by permitted facilities. These are similar to those previously listed under Part 265 and in Exhibit 4-2. Permit documents maintained at the facility should conform to those at the EPA Regional office or State agency. The inspector should verify that documents at the facility are complete, are the same as those maintained by the respective agencies, and that modifications made to documents at the facility have been approved by the permitting authority.

The inspector should complete applicable sections of the inspection checklist during the record review, leaving blank those items to be evaluated during the visual inspection.

4.4

General Procedures

In general, the visual inspection of the facility should proceed in accordance with an inspection plan or strategy developed by the inspector during inspection planning. As previously discussed in section 2.6, this plan should lay out, in the level of detail considered appropriate by the inspector (which may vary according to individual preferences), the operations the inspector intends to inspect and the tentative order in which the inspection will proceed. The inspector may, however, determine that it is appropriate to modify the plan based upon information obtained during the record review or other factors, such as the availability of specific personnel for interviewing or the scheduled operations of waste management units to be inspected. Inspectors should be flexible in changing their planned approach to suit conditions encountered at the facility.

Step-by-step procedures for visually inspecting a facility will vary according to the type of facility and the objectives of the inspection. Specific procedures for inspecting facilities for compliance with RCRA standards are provided by regulation and facility type in Appendix III to this document. This appendix provides a summary of RCRA standards in Parts 262, 263, 264, 265, 266, and 268, and describes detailed inspection procedures for determining compliance with Parts 262, 263, and the general facility standards of Parts 264 and 265.

Checklists which may be used as a guide in performing the inspection and in recording results of the inspection are provided in Appendix IV. Note that Regional offices and State agencies may have preferred checklists that should be used in lieu of those provided in Appendix IV.

When planning and performing the visual inspection, it is generally desireable that the inspection proceed in a way which allows the inspector to evaluate and understand the waste flow within the facility and to determine the compliance status of each segment of the facility's waste management system. For example, in a plant which generates hazardous waste, stores waste for off-site disposal, and treats some waste on-site, the inspection could proceed as follows, in brief:

Preceding page blank

- Inspect points of waste generation and accumulation. Determine if the owner/operator has identified all hazardous wastes based on generating operations, and determine if accumulation points meet satellite storage area requirements, if applicable.

- Evaluate in-plant waste transport from generation and accumulation points to storage and treatment units. Determine if there is potential for mislabeling, misplacing, or mishandling wastes, and if wastes are adequately tracked to enable proper identification at storage and treatment units.

- Evaluate storage and treatment units for compliance with applicable standards. Determine if wastes in units correspond to those whose points of generation have been inspected, and identify where any other wastes in the units come from. Determine if any hazardous wastes are generated in the unit (e.g., treatment sludge) and evaluate the management of such waste for compliance.

This type of flow enables the inspector to understand the movement and control of wastes within the facility, which is important in order to identify:

- Hazardous wastes which may not currently be considered hazardous by the owner/operator.

- Non-complying procedures or management practices which are part of the facility's routine operations.

- Steps in the management process during which wastes may be mishandled or misidentified, and in which there are opportunities for spills or releases.

- Unusual situations which may be encountered during the inspection which vary from the facility's stated normal operating procedures and which may indicate potential violations.

This type of flow also allows the inspector to complete checklists and to evaluate the facility in an organized manner, which helps to insure that all aspects of hazardous waste management activities at the facility are thoroughly inspected.

Inspections may be conducted on foot or, at larger facilities, by vehicle and on foot. In either case, inspectors should be alert to all that is happening at the facility and keep their eyes, ears, and noses open to any potential violations. Although it is generally good to follow an inspection plan in order to better understand waste generation and management within the facility, inspectors should not feel compelled to follow their original inspection plan or route. Rather, they should feel free to diverge from their original plan to further investigate any observations which may uncover potential violations or environmental hazards.

Inspectors should not allow facility representatives to hurry the inspection, direct the route of the inspection, or prevent them from asking pertinent questions of facility personnel. Inspectors should ask relevant questions of both the facility representative guiding them through the facility and of other personnel. Questioning diverse personnel may identify inconsistencies in explanations of procedures or operations that could indicate possible non-complying conditions that should be further investigated, and can also give the inspector an indication of the adequacy of the personnel training program. Answers to questions and observations that are not reported on checklists should be recorded in a field log or notebook, which is discussed in Section 4.5.

Inspectors should be careful to remain oriented during the tour of the facility so that they can accurately note locations of waste management areas, possible releases, potential sampling locations, etc. At larger facilities, inspectors should carry a map or plot plan in order to note locations and maintain their orientation.

Use of Inspection Checklists

As previously discussed, the inspector should complete as much of the applicable checklist(s) as possible in the facility office, generally during the record review, prior to visually inspecting the facility (unless the objectives of the inspection or other reasons dictate that the visual inspection occur before the record review). The inspector should leave blank those sections of the checklist(s) which cannot be answered without visual inspection.

During the visual inspection, the inspector should complete these sections. However, completing these sections is not the sole purpose of the visual inspection, and it is critical that the inspector not limit the visual inspection to only completing the checklist. Inspectors should be aware of, and investigate, all relevant waste generation and management activities throughout the facility, and be alert to what is happening around them as they tour the facility. If inspectors conduct visual inspections in ways which allow them to understand how wastes are generated, transported, and managed at the facility (as previously discussed), they should be able to complete the applicable checklists easily during the inspection.

Determining the Need for Sampling and Identifying Sampling Points

Sampling is not routinely conducted as part of CEIs at interim status and permitted facilities. Rather, sampling is generally performed during inspections conducted in support of case development, which normally occur after potentially non-complying conditions or criminal activities have been identified during a CEI or through other means. Sampling procedures to be followed during case development inspections/evaluations are provided in detail in the Technical Case Development Guidance Document, available from the

Office of Waste Programs Enforcement. Additional information on sampling is provided in several EPA publications, including:

- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA, Office of Solid Waste, Pub. No. SW-846, July 1982, as amended (Update I - April 1984; Update II - April 1985).

- Characterization of Hazardous Waste Sites - A Methods Manual, Volume II, Available Sampling Methods, EPA, Pub. No. 600/4-84/075, April 1985.

If sampling is to be conducted during a CEI, the need to sample will be determined or made known to the inspector during inspection planning. The inspector should refer to these manuals during inspection planning to obtain information on preparing sampling plans, taking samples, preserving samples, splitting samples with the owner/operator, and completing chain-of-custody requirements.

In most cases, the inspector will not perform sampling during CEIs. However, the inspector should be aware of, and identify, potential sampling requirements that may need to be fulfilled in future inspections, particularly in cases where the inspector has identified potentially non-complying conditions or criminal activity during the course of the inspection. In these cases, it is possible that case development inspections/evaluations will need to be performed at the facility in the future, and it is helpful when planning these inspections to have the results of previous inspections in which potential sampling locations and needs have been identified based on observed conditions at the facility.

Sampling is generally conducted to verify the identity of a waste or to identify potential releases of hazardous wastes or constituents to the environment. There are many possible conditions or activities which may lead the inspector to determine that future sampling will probably be necessary. Examples of some of these conditions include situations in which:

- The owner/operator is handling a potentially hazardous waste as a non-hazardous waste. Sampling may be required to verify that the waste is hazardous or non-hazardous.

- In-plant waste handling practices indicate that mislabeling/misidentification of waste is likely to occur, or that wastes may vary significantly in characteristic over time and be mismanaged as result. Sampling may be required to demonstrate that the facility is mislabeling or misidentifying wastes.

- There is visible or other observable evidence of possible releases of hazardous wastes from waste management units, satellite storage areas, waste generating areas, etc. Sampling media and wastes may be required to demonstrate that a release has occurred or is occurring.

- Wastes may be being managed improperly, i.e., in an inappropriate treatment or disposal unit. Sampling may be required to verify that the correct wastes are being managed in the facility's various waste management units.

The inspector should identify during the inspection the types and locations of samples that may need to be taken during future inspections to investigate potentially non-complying conditions, if they are encountered. The inspector may identify the media or wastes to be sampled, the physical locations to sample (e.g., the location of a possible release), the steps within a treatment process to sample, the physical characteristics of the medium to be sampled (e.g., sludge, granular solid), and other relevant information that would be helpful in developing a sampling plan for a future inspection.

Observations for Follow-up Case Development

Observations of potentially non-complying conditions or criminal activity made by inspectors during CEIs may result in the initiation of one of several types of enforcement actions, including:

- Issuing a warning letter.
- Issuing an Administrative Order.
- Issuing an Administrative civil penalty.
- Initiating a permit action.
- Instituting a civil court action.
- Instituting a criminal court action.

In some cases, these observations or conditions may be recorded directly on inspection checklists; in others, they may be recorded through other forms of documentation, such as photographs or field notebooks. In all cases, it is essential that all observations that may lead to or support further case development activities should be accurately and validly documented. Inspectors should record in their notebooks any and all observations made during the inspection and, where appropriate, use other forms of documentation (e.g., photographs) to further document potentially non-complying conditions. Documentation is discussed further in the following section.

During the inspection, inspectors should not threaten or suggest to the owner/operator or facility representative that they are in criminal violation of RCRA or that they will be receiving a court action of any kind.

4.5

Documentation

Documentation refers to all printed and mechanical media produced, copied or taken by the inspector to provide evidence of suspected violations. It is strongly recommended that the inspector record information collected during the inspection in only the following types of records: field notebooks, checklists, photographs, maps, and drawings. Recording information on other loose papers is discouraged; loose papers may be easily misplaced and the information on them discredited during hearings. Proper documentation and document control are crucial to the enforcement system, as the Government's case in a formal hearing or criminal prosecution often hinges on the evidence gathered by the inspector. Therefore, it is imperative that each inspector keep detailed records of inspections, investigations, photocopies, photographs taken etc., and thoroughly review all notes before leaving the site.

The purpose of document control is to assure the accountability of all documents for the specific inspection when that inspection is completed. Accountable documents include items such as logbooks, field data records, correspondence, sample tags, graphs, chain-of-custody records, bench cards, analytical records, and photos. To ensure proper document control, each document should bear a serialized number and should be listed, with the number, in a project document inventory assembled upon completion of the inspection. Water-proof ink should be used to record all data on serialized, accountable documents.

Field Notebook

In keeping field notes, it is strongly recommended that each inspector maintain a legible daily diary or field notebook containing accurate and inclusive documentation of all inspection activity, conversations, and observations. This will include any comments, as well as a record of actual or potential future sampling points, photograph points, and areas of potential violation. The diary or field notebook should contain only facts and observations because it will form the basis for later written reports and may be used as documentary evidence in civil or criminal hearings. Notebooks used for recording field notes should be bound and have consecutively numbered pages. A separate notebook should be used for each facility inspected, in case the notebook has to be made available to the owner/operator and/or his or her

Preceding page blank

attorney as part of a legal action (e.g., through discovery). Because field notebooks may be made available to the owner/operators and their attorneys, inspectors should be careful to avoid recording potentially embarrassing notes or notes which may weaken an future enforcement action.

For Federal inspectors, field notebooks are part of EPA's Regional files, not the inspector's personal record. State policy on field notebooks may vary, and State inspectors should inform themselves on State policy.

Checklists

In general, it is recommended that checklists be used in conjunction with field notebooks to record inspection observations. However, Regions or States may have different policies on the use of checklists, and inspectors should follow the applicable Regional or State policy.

Checklists have been provided for use by inspectors in Appendix IV of this document. In some cases, Regions or States may have preferred checklists that should be used instead of the checklists provided here. Inspectors should use the checklists preferred by their Region or State. Checklists should not be used as a substitute for knowledge and understanding of the regulations.

The use of checklists in conducting inspections has been discussed in Section 4.4. In general, it is important that inspectors remember that checklists are only a tool for organizing, conducting, and recording the results of an inspection; the purpose and scope of an inspection is not limited to just completing the checklist. Inspectors should not restrict an inspection to items on a checklist, and should be observant of the general operation of the facility, of waste management practices, and of potentially regulated activities not covered by checklists (e.g., new activities that the inspector was not aware of in planning the inspection) as they perform the record review and visual inspection.

The inspector should generally limit comments on the checklist to checking the relevant answers, although more extensive comments may be made if no alternative record is available for noting observations. It is recommended that comments or observations on checklist answers be recorded in the field notebook, where there is adequate room for explanations, sketches, etc., to expand upon checklist answers.

Photographs

Photographs provide the most accurate documentation of the inspector's observations, and they can be a significant and informative source for the inspector, for review prior to future inspections, at informal meetings, and at hearings. Documentation of a photograph is crucial to its validity as a representation of an existing situation. For each photograph taken, the following items should subsequently be entered in the inspector's field notebook, or on the facility map, as such information is crucial to the validity of the photograph's representation of an existing situation:

- Date
- Time
- Number of the photo on the roll
- Type of film, lens, and camera used
- Photographed by (signature)
- Name and ID number of site
- General direction faced by inspector when taking photograph
- Location of checkpoint on site
- Other comments (e.g., weather conditions).

Comments should be limited to these pertinent facts because any discussion of the photograph in terms of its contents could jeopardize its value as evidence.

The type of camera used by the inspector is optional; however, 35 mm single lens reflex cameras are most common. Inspectors should also be aware that photographs taken with a telephoto lens may not be admissible evidence because these lenses may distort the scale of the photo or image. When taking photos, inspectors should include in the photograph a ruler or other item, as appropriate, for showing the scale of the object photographed.

Maps and Drawings

Schematic maps, drawings, charts, and other graphic records can be useful in documenting violations. They can provide graphic clarification of a particular site relative to the overall facility; demonstrate spill or contamination parameters (e.g., the size of a contaminated area) relative to the height or size of objects; and other information that, in combination with other documentation, can produce an accurate and complete evidence package.

Maps and drawings should be simple and free of extraneous details. Basic measurements should be included to provide a scale for interpretation, and compass points should be included. Generally, maps should also be used to show where photographs were taken, and in what direction; photo locations can be shown on the map using the roll number, exposure (photo) number, and a direction arrow.

4.6

Closing Discussion With Owner/Operator

Facility officials are usually anxious to discuss the findings of an inspection prior to the departure of the inspector(s). A closing meeting or conference should be held for the presentation and discussion of preliminary inspection findings. This closing meeting or conference is a good time to answer final questions, to prepare necessary receipts, to provide information about RCRA, and to request the compilation of data that were not available at the time of the inspection. The inspector should be prepared to discuss general follow-up procedures, such as how results of the inspection will be used and what further communications from the Region or State the facility may receive. Closing conferences should be conducted in accordance with any applicable guidelines established by the EPA Regional Administrator or State director.

In order to conduct the closing discussion, the inspector should:

1) Review inspection notes and checklists in private to determine the best approach to the discussion. The inspector may need to take time to refer back to applicable federal or State standards, call his or supervisor, or call the RCRA-Superfund Hotline, to get a clear interpretation of the regulations as they apply to the specific conditions at the facility. In general, the inspector should:

   A) Identify any questions for the facility officials that may still need to be answered before leaving the facility. These questions may include questions raised during the visual inspection that need clarification and questions concerning potential violations uncovered during the inspection that the facility representative is unaware of.

   B) Determine which inspection results to discuss with the facility representatives and how to discuss the results, i.e., determine how definitively to present results. Of course, all inspection findings are preliminary until reviewed by the inspectors supervisor. However, inspectors should be prepared to forthrightly discuss all obvious violations of rules observed during the inspection; they should not discuss or threaten civil or criminal action. Inspectors may or may not want to discuss tentative findings where there is

Preceding page blank

doubt that a violation has occurred and where the inspector will need to further review facility conditions, regulations, and guidance to determine compliance. Inspectors don't have to have their inspection results final at the close of inspection. In these cases, inspectors generally should inform the facility representative of those conditions that may be in violation and briefly discuss how the inspector will resolve the compliance question.

C) Anticipate questions that may be asked by the facility representatives and determine how to respond. Obviously, questions that may be asked will largely depend on inspection results. The inspector can anticipate that the facility representative may challenge specific results, may ask for clarifications of rules or results, and may request help in understanding how to respond to or correct non-complying conditions. The inspector should be prepared to answer all questions within his or her ability, authority and knowledge, and to defer answering questions which he or she can't answer with certainty. The inspector should tell the facility representative how he or she will follow-up on deferred questions, and may refer the representative to appropriate EPA or State officials for answers to questions beyond his or her authority.

2) Meet with the facility representatives to ask questions, review results, and respond to questions from the representatives in accordance with the approach developed under (1) above. When presenting results, the inspector should stress that all inspection results are preliminary until reviewed and discussed with the inspector's supervisor. The inspector should inform the facility representative that the overall compliance status of the facility will be determined after review of inspection results with supervisory personnel and the issuance of an inspection report. The inspector should answer questions from the facility representative as planned under (C) above.

In conducting the meeting, it is essential that the inspector maintain a professional, courteous demeanor, even though the attitude of facility representatives may not be cordial. Because the inspector is often the only contact between EPA or the State agency and the regulated industries, he or she should be keenly aware of opportunities to maintain and improve agency-industry relations. The closing conference provides a good opportunity to offer various kinds of help to facility officials, within appropriate limits. Having just completed an inspection, the inspector will have first-hand knowledge of questions and problems and of ways to help overcome them. Besides answering all questions within the inspector's authority and referring other questions to Regional or State officials, the inspector may be able to help the facility officials by:

- Discussing problems with facility officials and tactfully offering help and suggestions, as appropriate. Inspectors should limit their comments to relatively straightforward interpretations of rules and resolutions of problems. Inspectors should avoid providing any advice or assistance that would prejudice the government's case in a subsequent enforcement action (e.g., making guarantees that the facility would come into compliance by performing certain actions, other than those specified verbatim in regulations). Additionally, inspectors should be careful to avoid making suggestions that might imply that a "consultant" type of relationship exists with the owner/operator.

- Offering or suggesting available resources to facility officials to help overcome problems (i.e., Agency outreach materials, technical publications, special services available to industry, etc.).

Contact with the facility after the inspection can serve to gather additional information and show interest in the facility, but such contacts should be made with discretion. Inspectors should avoid making contacts just to "be a nice guy;" contacts should serve enforcement or compliance objectives. It is important for the inspector, as an industry relations representative, to follow-up on deferred questions, referrals, and offers of help made during the inspection. These activities, within appropriate limits (which may be set by Regional or State policy), contribute towards achievement of a major enforcement objective: making regulated facilities come into, or maintain, compliance. A letter, phone call, or repeat visit indicates to facility officials that the regulatory agency is genuinely interested in assisting them achieve compliance (within appropriate limits), and that the agency is paying attention to their actions, or lack thereof, towards achieving or maintaining compliance.

Inspectors should never recommend a particular consultant or consulting firm to the facility, even if asked to do so. Inspectors may recommend that a facility contact a professional society about obtaining professional assistance.

Chapter Five

Preparing Inspection Reports

SECTION		PAGE
5.1	**REPORT PREPARATION**	5-3
	Objectives	5-3
	Report Preparation Procedures	5-4
5.2	**REPORT ELEMENTS**	5-7
	Checklists	5-7
	Narrative Information	5-7
	Documentary Support	5-8
5.3	**FOLLOW-UP DISCUSSIONS AND FILE PREPARATION**	5-13
	Preparing Inspection Files	5-14
5.4	**DISCLOSURE OF OFFICIAL INFORMATION**	5-17
	Requests for Information	5-17
	Confidential Business Information	5-18

5.1

Report Preparation

The adequacy of follow-up to correct problems or deficiencies noted during an inspection depends greatly on the report package the inspector prepares following the inspection. The report must be organized in a manner that allows the inspector and his or her supervisor to make maximum use of the information. It is also essential that the report be completed expeditiously so that results are available to support further actions, especially in situations where a facility has significant violations. During report preparation, inspectors should bear in mind that enforcement actions may be taken against the facility at a later date, and that these actions will benefit from the support of a timely, complete, accurate, and well-organized report.

The intent of this guidance is to present a general method of reporting inspection findings and conclusions. The guidance does not provide a required or recommended report format; Regions and States generally have preferred formats tailored to their specific procedures and requirements.

Objectives

The objective of an inspection report is to organize and coordinate all relevant information and evidence gathered during an inspection in a comprehensive and usable manner. To meet this objective, the information presented in an inspection report must be:

- Accurate. All information must be factual and based on sound inspection practices. Observations should be the verifiable results of first-hand knowledge. Case proceedings personnel must be able to depend on the accuracy of all information.

- Relevant. Information in an inspection report should be pertinent to the subject of the report. Irrelevant data clutter a report and can reduce its clarity and usefulness.

Preceding page blank

- Comprehensive. The subject of the report [i.e., suspected violation(s)] should be substantiated by as much factual, relevant information as possible. The more comprehensive the evidence is, the better and easier the case development process becomes.

- Coordinated. All information pertinent to the subject should be organized into a complete package. Documentary support (photographs, photocopies, statements, sample analyses, etc.) accompanying the report should be clearly referenced so that anyone reading the report will get a complete and clear overview of the subject.

- Objective. Information should be objective and factual.

- Clear. The information in the report should be presented in a clear, well-organized manner.

- Neat and legible. Adequate time should be taken to allow the preparation of a neat, legible report.

Report Preparation Procedures

A basic four step procedure applies to the preparation of inspection reports, regardless of the specific nature of the elements/contents. Each of these steps is briefly described here:

- Reviewing the information. The first step in preparing the report is to collect all information gathered during the inspection. The inspector should assemble checklists, field notebooks, photos, maps, photocopies, and drawings and review the material for relevancy and completeness. When gaps in information are discovered, the inspector should obtain necessary data by means of a telephone call or, in unusual circumstances, a follow-up visit.

- Organizing material. Information may be organized in any of several different forms, depending on the requirements of the agency the inspector represents. However, the report should include each of the elements just discussed and should present the information in a logical, comprehensive manner. The narrative should be easily understandable (perhaps a cross-referencing system with the checklist would be appropriate).

- Referencing accompanying material. All documentary support that accompanies an inspection report should be clearly referenced to enable the reader to locate documents easily. All documentary support should be checked for clarity prior to writing the report.

- Writing the narrative report. When all appropriate information has been assembled, the narrative section of the report can be written. Its purpose is to present a factual record of the procedures used in the inspection and of the resulting findings. Using the field notebook as a guide for preparing the narrative report, the inspector should refer to the routine procedures and practices used during the inspection, but should describe in detail facts relating to potential violations and discrepancies. The report should be developed logically from the organizational framework of the inspection.

It is recommended that any confidential business information included in the inspection report be referenced in a nonconfidential manner (i.e., by Document Control Number and a general description of the information contained in the document). An alternative would be to include the information, but to treat the entire inspection report as a confidential document. If the latter alternative is selected, the report would be logged in with the Document Control Officer to ensure that only persons cleared for access are permitted to review it.

5.2

Report Elements

Although specific information requirements will vary among facilities, each report comprises three elements: checklists, narrative information, and documentary support. Suspected violations must be documented in these elements. Each element of the inspection report is described in the following subsections.

Checklists

Checklists are designed to lead to the collection of standard reviewable information. They function as guides to ensure that all basic data are being collected, and are generally completed as the inspection progresses and then included in the inspection report as completed. A detailed discussion of checklists appears in Section 4.4.

In instances where the checklist(s) need clarification and elaboration, inspectors should use the information recorded in their field notebooks and other information (e.g., from the inspection file) to expand upon checklist results in the narrative body of the inspection report. Inspection checklists represent only one component of a complete report; they should not be considered sufficient in and of themselves. The inspection checklists used and included in reports will vary according to individual State and Regional procedural requirements.

Narrative Information

A narrative discussion of the facility inspected, its operations, and the findings of the inspection is an important element of the inspection report. The narrative should, at a minimum:

- Explain what the facility does.
- Discuss manufacturing and waste management operations at the facility.
- Describe the wastes generated and how they are handled.

Preceding page blank

- Describe apparent violations, and discuss the documentary evidence supporting the determination that the facility is in violation.

The narrative supports and explains findings presented in the inspection checklists. The narrative, which is intended to describe results more fully, may include recommendations for follow-up actions. A recommended outline for the narrative is presented in Exhibit 5-1.

In preparing the narrative, simplicity of presentation should be a prime consideration. The following are some reminders for preparing a good, concise narrative report:

- Use a simple writing style; avoid stilted language.
- Use active rather than passive voice (e.g., "I observed..." rather than "It was observed...").
- Keep paragraphs brief and to the point.
- Avoid repetition.
- Proofread the narrative carefully upon completion.

Documentary Support

All documentation that is intended to provide evidence of suspected violations should be included as a part of the inspection report. Such documentation includes statements, photographs, photocopies, drawings and maps, printed matter, mechanical recordings, and copies of permits and records. A specific example of important documentation is a photograph showing a specific violation at a facility (e.g., a violation of aisle space requirements at a drum storage facility). The documentation for the photograph includes the photo itself; supporting documentation in the inspectors field notebook providing information on where the photo was taken, who took it, what type of equipment was used, when it was taken, and what roll of film and exposure number it is; and supporting documentation on the facility map or plan showing where the photo was taken, and in which direction/perspective. The information that should be recorded in field notebooks and on facility maps to document photographs is discussed in Section 4.5.

EXHIBIT 5-1. RECOMMENDED NARRATIVE OUTLINE

I. GENERAL INFORMATION

1. Facility Information:	(Name, Address, Telephone)
2. Responsible Official:	(Name, Title)
3. Inspection Participants:	(Name, Agency or Company)
4. Date of Inspection:	
5. Applicable Regulations:	40 CFR Parts 260-270
6. Purpose of Inspection:	(Requested by, inspection of, sampling of, etc.)
7. State Coordination:	(Assisted by, copy of report to, additional information obtained from)
8. Facility Description:	(RCRA related activities, including operations, wastes generated, waste handling)
9. Apparent Violations:	(Regulatory citation, nature of violation, evidence)

II. FOR GENERATORS

10. General Standards for Generators:	262.10 - 262.12 (Describe compliance with these standards)
11. The Manifest:	262.20 - 262.23 (Establish existence of manifest records, assess adequacy with respect to regulatory requirements).
12. Pre-transport Requirements:	262.30 - 262.34 (Review packaging, labeling, marking and placarding procedures for compliance with the regulations. Establish compliance with accumulation time restrictions).
13. Recordkeeping and Reporting:	262.40 - 262.43 (Establish existence of annual reports and additional reports).
14. Special Conditions:	262.50 - 262.51 (Inspect for reports of international shipments of waste, and proper notification to the Administrator).

EXHIBIT 5-1. (CONTINUED)

III. FOR TRANSPORTERS

15.	General:	263.10 - 263.11 (Ensure that the transporter has obtained an EPA I.D. number).
16.	Manifest System and Recordkeeping:	263.20 - 263.22 (Establish existence of manifest records and compliance with manifest procedures).
17.	Hazardous Waste Discharges:	263.30 - 263.31 (Ensure the transporter is aware of the responsibilities of this section. Check to see if any discharge reports have been reported to the Department of Transportation as required by these regulations).

IV. FOR TSDFs

18.	General Facility Standards:	264, 265.10 - 264, 265.37 (Describe compliance with these standards).
19.	Preparedness and Prevention:	264, 265.30 - 264, 265.37 (Check for required equipment and arrangements with local authorities).
20.	Contingency Plan and Emergency Procedures:	264, 265.30 - 264, 265.69 (Check records and procedures for adequacy with respect to the requirements of this section).
21.	Manifest System, Recordkeeping and Reporting:	264, 265.70 - 264, 265.77 (Establish existence of manifest records, operating record, annual report and unmanifested waste report. Assess adequacy with respect to regulatory requirements).
22.	Groundwater Monitoring:	264, 265.90 - 264.99 or 265.94 (Examine groundwater monitoring plan and review results of sampling analysis).
23.	Corrective Action Program:	264.100 (Review status of corrective action program.
24.	Closure and Post Closure:	264, 265.110 264, 265.120 (Review closure and post closure plan for adequacy with respect to regulatory requirements).

EXHIBIT 5-1. (CONTINUED)

25. Facility Specific Standards:	264, 265.170 - 264.351 or 265.430 (Depending upon the type of facility being inspected, establish compliance with the appropriate regulatory standards).
26. Permit Conditions	(Review violations of specific permit conditions or schedules of compliance; applies to permitted facilities only).

5.3

Follow-Up Discussions And File Maintenance

During preparation of the inspection report and following its completion, the inspector may need to brief or discuss inspection results with supervisors, case development officers, other State or Regional enforcement personnel, and permitting personnel. In particular, it is likely that the inspector will brief his or her supervisor on the inspection results (particularly observed violations). The inspector may also brief the Regional Case Development Officer (RCDO), equivalent State case development officer, or enforcement decision group on the inspection to assist the RCDO in determining the need for possible enforcement action, to answer questions about the performance of the inspection, or to clarify inspection results in order to develop additional evidence in support of enforcement case development.

In addition to these briefings or discussions, the inspector should be prepared to discuss results with other Regional or State personnel as appropriate based upon the facility's situation and the specific results. Situations in which the inspector may need to discuss results with other personnel include:

- Cases where the inspector has referred the facility representative to other Regional or State personnel for information or assistance. The inspector should inform other Regional or State personnel who may be contacted by the facility for assistance based on the inspector's recommendations during the closing discussion, and brief these personnel concerning conditions at the facility and the types of questions that they should expect to receive.
- Cases where the facility is subject to both Federal and State enforcement (e.g., cases in which some waste management units at the facility are subject to enforcement by a partially authorized State and some units are subject to EPA enforcement), and the inspector observes potential violations at units not within his or her jurisdiction. The inspector may inform the Regional or State agency with enforcement authority over the unit(s) of violations observed by the inspector which fall within the respective Region's or State's jurisdiction. Regions and States may have policies for informing other agencies with which they share joint authority over hazardous waste management

Preceding page blank

facilities; inspectors should become familiar with and follow policies applicable to their jurisdiction.

- Cases where a facility has applied for a permit, or is operating under a permit, and where the inspector identifies conditions which conflict with those presented in the permit application or required in the permit. Where a facility has applied for a permit, and conditions at the facility are not consistent with the application, the inspector may want to inform the permit writer of the conflicting conditions. Where the facility has been permitted, and conditions are not consistent with the permit, the conditions may constitute violations unless a modification has been applied for and approved. In such cases, the inspector may want to confer with the permit writer on the observed conditions and any modifications which the facility may have applied for or discussed with the permit writer, prior to determining how to present these conditions in the inspection report.

Preparing Inspection Files

Upon completion of the inspection report, inspectors should organize the report, notes, and other documentary information into an inspection file. Where inspection documentation includes confidential business information, it may be appropriate to separate the information into two files, a non-confidential file and a confidential file.

Proper organization of inspection information into files so that material can be easily reviewed is important in helping to expedite review of inspection results to determine possible enforcement actions. For EPA inspections, inspection files are normally sent to Regional Case Development Officers (RCDO) for review. The RCDO reviews the file in depth to determine the adequacy of information in the file to support any necessary enforcement actions and to substantiate elements of a violation. The result of the review will generally be a recommendation to proceed with an enforcement action or to dismiss violations as not worthy of prosecution. For State inspections, State inspection files may go through a similar review by comparable State enforcement personnel.

The non-confidential inspection file should contain the inspectors report and all forms of non-confidential documentation, which may include:

- Field notebooks.

- Documents relating to sampling, as appropriate (e.g., custody records, analytical results).

- Photographs.

- Drawings and maps.

Where necessary, a confidential business information (CBI) inspection file may also need to be prepared. This file would include all CBI obtained during the inspection, and the results of analyses for samples considered to be CBI. Relevant procedures for logging CBI with Document Control Officers, or the State equivalent, should be followed in developing this file. The CBI inspection file can only be reviewed in accordance with RCRA CBI control and security procedures. For more information on CBI procedures, inspectors should review the RCRA Confidential Business Information Security Manual, available from the Office of Solid Waste, Office of Program Management and Support.

5.4

Disclosure of Official Information

In addition to holding closing conferences and preparing final reports on the findings of a facility site inspection, inspectors are responsible for making information available to the public. This section presents details on how to handle requests for general information and the procedures for confidential business information.

Requests for Information

The aim of EPA's "open-door" policy on releasing information to the public is to make information about EPA and its work freely and equally available to all interested individuals, groups, and organizations. In fact, EPA employees have both a legal and traditional responsibility for making useful educational and safety information available to the public. This policy, however, does not extend to information related to the suspicion of a violation, evidence of possible misconduct, or confidential business information. When such information is requested, personnel should immediately notify their supervisor and/or legal counsel. Representatives of State agencies may use EPA's policies on information disclosure as a guide in the absence of formal procedures of their own.

Details on contacts with the media are summarized here. Inspectors should clear any contacts with the press, other communications media, and interested groups, with their supervisor, Regional public affairs office, or State public affairs office. Inspectors should be familiar with and follow Regional or State policy with respect to press relations.

In situations where the inspector or an inspection team is authorized to discuss activities with the press or interested groups, one member should be designated as the spokesperson to provide information concerning inspection responsibilities and investigative activities. Questions concerning investigation of alleged violations and enforcement policy should be referred to the EPA Regional Counsel or appropriate State enforcement staff attorney for response. In all contacts with the media, inspectors should be careful not to make careless or accusatory statements.

Preceding page blank

Confidential Business Information

All confidential information obtained will be marked as such and placed in a locked filing cabinet or safe. Only authorized personnel will be allowed access to the file. No copies of CBI will be made unless authorized in writing by the document control officer. Inspectors and other enforcement personnel have a responsibility to the submitters of RCRA CBI to maintain the confidentiality of such information. Personnel handling CBI are prohibited from disclosing, in any manner or to any extent not authorized by law, any RCRA CBI they have access to in the course of their employment or official duties. Requests for access to confidential information by any member of the public or by a State, local, or federal agency will be handled according to the procedure described in the Freedom of Information Act regulations (40 CFR 2). All requests will be referred to the responsible Regional organizational unit.

Section 3001(b) of RCRA and 40 CFR 2.305(h) authorizes EPA to furnish CBI to State agencies acting as authorized representatives of the Unites States in support of RCRA, provided the State agency has its own CBI procedures approved by EPA. States must either develop their own procedures that are no less stringent than EPA's or adopt EPA's existing procedures. State and Regional RCRA CBI procedures will vary. Inspectors will become familiar with their specific procedures prior to obtaining CBI authorization access.

Confidential claims for RCRA should not be confused with confidential claims under other environmental laws (e.g., Toxic Substances Control Act).

Unauthorized disclosure of RCRA CBI may subject an employee to criminal penalties under 18 United States Code (USC) Section 1905. Violations of RCRA CBI procedures by employees may result in the revocation of CBI authorization access and/or further disciplinary action.

For more detailed information inspectors should consult the RCRA Confidential Business Information Security Manual, Office of Solid Waste, US EPA, Draft, March 1984.

Contract inspectors must provide the same degree of protection to RCRA CBI that is provided by EPA or an authorized State agency. Although the contractor protection of CBI must be equivalent to EPA, the nature of contracts is such that the specific procedures are somewhat different. Contract inspectors should first consult Contractor Requirements for the Control and Security of RCRA Confidential Business Information, Office of Solid Waste, US EPA, March 1984.

Appendix I

Keeping Up With RCRA

Inspectors should keep up to date with changes in the RCRA standards (or equivalent State standards, as appropriate). The complete Federal RCRA standards are published annually by the U.S. Government Printing Office (GPO) in Title 40 of the Code of Federal Regulations (CFR). However, regulations amending or adding to the CFR may be promulgated by EPA at any time during the year; such amendments or additions are published by the GPO in the Federal Register, which appears daily and can be obtained in EPA Regional libraries.

The annual edition of the CFR includes all revisions made to the CFR which have been published in the Federal Register during the previous year. The annual revision of Title 40 of the CFR, which contains the RCRA standards (40 CFR Parts 260-272), is available from GPO in November, and usually reflects changes to the regulations promulgated through July. Thus, the 1987 edition of Title 40 would appear in November, 1987, and reflect all amendments or additions made to the RCRA regulations through July 1, 1987.

Keeping up with changes to the standards made during the year can be difficult. To help interested parties keep track of newly promulgated or pending changes to the RCRA regulations (and other environmental standards), EPA issues a semi-annual listing of recently completed and pending regulatory actions. This listing, the "Semiannual Regulatory Agenda", is published in the Federal Register, usually in April and October of each year. The agenda lists regulatory actions at the pre-rule, proposed rule, final rule, and completed action stage. Generally, actions at the final rule or completed action stage will be of most interest to inspectors. Actions at the final rule stage include regulations which EPA expects to promulgate as final rules within the year; the agenda provides a planned date of promulgation and an EPA Headquarters contact for the rule. Completed actions generally include recently promulgated regulations; the agenda provides the date on which recently promulgated standards were published in the Federal Register and provides the Federal Register citation for the standards.

EPA Headquarters also maintains the RCRA-Superfund HOTLINE to answer questions anyone may have concerning the RCRA standards. The Hotline can provide inspectors with up-to-date information on recently promulgated standards and send copies of regulations which have appeared in the Federal

Register, as well as help to clarify the interpretation of RCRA regulations and answer other questions concerning the RCRA program.

The Hotline number is:

- HOTLINE - 1-800-424-9346

The Hotline publishes a monthly report, titled the "RCRA-Superfund Industry Assistance Hotline Report," which provides information on regulations and guidance published during the preceding month and answers to particularly pertinent questions asked by Hotline users. This report may be obtained by request from:

U.S. Environmental Protection Agency
Office of Solid Waste
Office of Program Management and Support
WH-562
Washington, D.C. 20460

Finally, a number of newsletters published by various services provide information on RCRA standards. These may be available in EPA Regional libraries or, by subscription, from the publisher.

Receiving Revisions to this Document and "The RCRA Inspector News"

The Office of Waste Programs Enforcement intends to periodically update this manual to reflect changes in RCRA standards and enforcement policy. Additionally, OWPE publishes a newsletter, "The RCRA Inspector News," which provides timely information on issues of special importance to the RCRA inspector. Finally, OWPE may issue companion guidance documents on inspection procedures for inspecting particular types of facilities or practices. Persons wishing to receive updates to this manual, "The RCRA Inspector News," and companion guidance documents should complete the addressed postcard on the following page and mail it to OWPE.

Appendix II

Glossary

Administrator	- The Administrator of the United States Environmental Protection Agency, or his designee.
Administrative Action	- A nonjudicial enforcement action taken by the Administrator (or his designee) or a State.
Administrative Order	- An order issued by the Administrator (or his designee) to a violator of RCRA provisions that imposes enforceable legal duties; e.g., forcing a facility to comply with specific regulations. The four types of RCRA orders are compliance orders, corrective action orders, monitoring and analysis orders, and imminent hazard orders.
Administrative Procedures Act	- Administrative Procedures Act (APA) is a Federal statute that provides standards for informing the public about the actions of Federal agencies and assuring them that their interests are properly protected.
Aquifer	- Rock or sediment in a formation, group of formations, or part of a formation that is saturated and sufficiently permeable to transmit economic quantities of water to wells and springs.
Biennial Report	- A report (EPA Form 8700-13A) submitted by generators of hazardous waste to the Regional Administrator, which is due March 1 of each even-numbered year. The report includes information on the generator's activities during the previous calendar year. The owner or operator of a treatment, storage, and disposal facility must also prepare and submit a biennial report on EPA Form 8700-1313.
Boiler	- An enclosed device using controlled flame combustion and having the following characteristics: 1) The unit must be able to recover and export thermal energy in the form of steam, heated fluids, or heated gases; and 2) the unit's combustion chamber must be of integral design (i.e., physically formed in one manufactured or assembled unit); and 3) the unit must maintain an energy recovery efficiency of at least 60 percent; and 4) the unit must export for use at least 75 percent of recovered energy, calculated on an annual basis.

CERCLA - Acronym for the Comprehensive Environmental Response, Compensation, and Liability Act, passed in 1980 and commonly known as "Superfund." CERCLA gives the Federal Government the power to respond to releases, or threatened releases, of any hazardous substance into the environment as well as to a release of a pollutant or contaminant that may present an imminent and substantial danger to public health or welfare. CERCLA established a Hazardous Substance Trust Fund (Superfund), which is available to finance responses taken by the Federal Government.

CFR - Abbreviation for the Code of Federal Regulations, a document containing all finalized regulations.

Characteristics - The EPA has identified four characteristics of a hazardous waste: ignitability, corrosivity, reactivity, and toxicity. Any solid waste that exhibits one or more of these characteristics is classified as a hazardous waste under RCRA.

Civil Action - A law suit filed in court against a person who has either failed to comply with statutory or regulatory requirements or an administrative order or has contributed to a release of hazardous wastes or constituents. The four types of civil actions are compliance, corrective, monitoring and analysis, and imminent hazard.

Closure - The act of securing a hazardous waste management facility or unit pursuant to the requirements of 40 CFR Part 264.

Compatibility - The ability of materials to exist together without adverse environmental effects or health risks. Primarily applied to waste fluid combinations and liner materials.

Compliance Order/Action - An order or action issued under Section 3008(a) of RCRA; it requires any person who is not complying with a requirement of RCRA to take steps to come into compliance.

Conditionally Exempt Small Quantity Generator - A generator that generates less than 100 kilograms of hazardous waste in a calendar month, and is therefore not subject to the handling procedures required under RCRA for that month.

Confidential Business Information - Any information, in any form, received by EPA, an authorized State, or an EPA contractor, from any person, firm, partnership, corporation, or association; local, State, or federal agency; or foreign government; that contains trade secrets or commercial or financial information that has been claimed as confidential by the person submitting it, and that has not been determined to be non-confidential under the procedures in 40 CFR Part 2.

Container - Any portable device in which material is stored, transported, treated, disposed of, or otherwise handled.

Contaminant - Any solute that enters the hydrologic cycle through human action (limited definition for use in context of this report).

Contingency Plan - A document setting out an organized and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents from a treatment, storage, or disposal facility that could threaten human health or the environment.

Corrective Action - Actions, required by law, undertaken by a treatment, storage, or disposal facility to alleviate potential or existing threats to human health and the environment posed by a release or threatened release of hazardous substances, wastes, or constituents at a site.

Corrective Action Order - An order EPA issues that requires corrective action under RCRA Section 3008(h) at a facility where a release of hazardous waste or constituents into the environment has occurred. Corrective action may be required beyond the facility boundary, and it can be required regardless of when the waste was placed at the facility.

Criminal Action - A prosecution action taken by the U.S. Government or a State toward any person(s) who have knowingly and willfully failed to comply with the law. Such an action can result in the imposition of fines or imprisonment.

Deep-Well Injection - The subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well whose depth is greater than the largest surface dimension.

Designated Facility - A hazardous waste treatment, storage, or disposal facility that has received an EPA or State permit (or has interim status) and has been designated on the manifest by the generator as the facility to which the generator's waste should be delivered.

Discharge or Hazardous Waste Discharge - The accidental or intentional spilling, leaking, pumping, pouring, emitting, or dumping of hazardous waste onto any land or into any water.

Disposal - The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or onto any land or into any waters so that any constituent thereof may enter the environment or may be emitted into the air or discharged into any waters, including ground waters.

Disposal Facility - A facility or part of a facility at which hazardous waste is intentionally placed into or on any land or into water and where the waste will remain after closure.

DOT	- Department of Transportation. DOT shares authority with EPA concerning the transportation of hazardous materials, including labeling, containment, and accident reporting requirements.
Endangered and Threatened Species	- Species whose populations are so reduced in number or whose range is so limited in geographic extent that further reduction in numbers or in size of available habitat could inalterably reduce the breeding success of the species and lead to subsequent extinction. These species are listed in Section 4 of the Endangered Species Act.
EPA Identification Number	- The unique number assigned by EPA to each generator or transporter of hazardous waste and to each treatment, storage, or disposal facility.
EP Toxicity	- A test, called the extraction procedure, that is designed to identify wastes likely to leach hazardous concentrations of particular toxic constituents into the ground water as a result of improper management.
Exception Report	- A report that generators who transport waste offsite must submit to the Regional Administrator if they fail to receive a copy of the manifest, signed and dated by the owner or operator of the designated facility to which their waste was shipped, within 45 days of the date the initial transporter accepted the waste.
Existing Facility	- A facility that was in operation or for which construction began on or before November 19, 1980.
Facility	- All contiguous land, structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units; e.g., one or more landfills, surface impoundments, or a combination of them.
Fault	- A break in earth materials along which a measurable amount of movement has taken place.
Federal Register	- A document published daily by the Federal Government that contains either proposed or final regulations.
Final Status	- A TSD facility that has interim status acquires final status when final administrative disposition has been made of its RCRA Part B permit application.
Floodplain	- The flat areas adjacent to stream channels and covered by water during periods of flooding.
Food-Chain Crops	- Tobacco, crops grown for human consumption, and crops grown to feed animals.

Freeboard - The vertical distance between the top of a tank or surface impoundment dike and the surface of the waste contained therein.

Generator - Any person who creates a hazardous waste or any person who first makes the waste subject to the Subtitle C regulation [e.g., imports a hazardous waste, initiates a shipment of a hazardous waste from a treatment, storage, or disposal facility (TSD), or mixes hazardous wastes of different Department of Transportation (DOT) shipping descriptions by placing them into a single container].

Ground Water - Water below the land surface in a zone of saturation.

Ground-Water Flow - The direction of ground-water movement and of any contaminants it contains; governed primarily by the hydraulic gradient.

Ground-Water Quality - The ambient chemical, physical, and biological quality of ground water; generally defined by State and local standards to determine suitability as a drinking-water supply. Uncontaminated ground water's suitability as a drinking-water supply is generally based on its total dissolved solids (TDS) content.

Ground-Water Recharge - The addition of water to the ground-water system by natural or artificial processes.

Guidance - Documents issued primarily to elaborate and provide direction on the implementation of regulations.

Hammer Provision - Statutory requirements that go into effect automatically if EPA fails to issue regulations by certain dates specified in the statute.

Hazardous Waste - As defined in RCRA, the term "hazardous waste" means a solid waste or combination of solid wastes that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may

a) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or

b) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed.

As defined in the regulations, a solid waste is hazardous if it meets one of four conditions:

1) Exhibits a characteristic of a hazardous waste (40 CFR Sections 261.20 through 262.24).

Hazardous Waste (continued)

2) Has been listed as hazardous (40 CFR Sections 261.31 through 261.33).

3) Is a mixture containing a listed hazardous waste and a nonhazardous solid waste (unless the mixture is specifically excluded or no longer exhibits any of the characteristics of hazardous waste).

4) Is not excluded from regulation as a hazardous waste.

HSWA - Abbreviation for the Hazardous and Solid Waste Amendments of 1984 (Public Law 98-616), which significantly expanded both the scope and the coverage of RCRA.

Imminent Hazard Order - Used by the responsible agency, under the authority of RCRA Section 7003, to force any person contributing to an imminent and substantial endangerment to human health or the environment as a result of the handling of nonhazardous or hazardous solid waste to take steps to clean up the problem.

Incinerator - Any enclosed device using controlled flame combustion that neither meets the criteria for classification as a boiler nor is listed as an industrial furnace.

Industrial Furnace - Any of the following enclosed devices that are integral components of manufacturing processes and use controlled flame devices to accomplish recovery of materials or energy: 1) cement kilns; 2) lime kilns; 3) aggregate kilns; 4) phosphate kilns; 5) coke ovens; 6) blast furnaces; 7) smelting, melting, and refining furnaces; 8) titanium dioxide chloride process oxidation reactors; 9) methane reforming furnaces; 10) pulping liquor recovery furnaces; 11) combustion devices used to recover sulfur from spent sulfuric acid; 12) other devices as added to this list by EPA.

Inner Liner - A continuous layer of material placed inside a tank or container to protect the construction materials of the tank or container from the contained waste or reagents used to treat the wastes.

Interim Status - A status classification that allows owners and operators of TSD's that existed or were under construction prior to November 19, 1980, to continue to operate without a permit after this date. Owners and operators of TSD's are eligible for interim status on an ongoing basis if the TSD is in existence on the effective date of regulatory changes under RCRA that cause the facility to be subject to Subtitle C regulation. Owners and operators in interim status are subject to and must comply with the applicable standards in 40 CFR Part 265. Interim status is gained through the notification process and by submitting Part A of the permit application.

Landfill - A disposal facility or part of a facility where hazardous waste is placed in or on land and that is not classified as a land treatment facility, a surface impoundment, or an injection well.

Land Treatment - A facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface. Such facilities are disposal facilities if the waste remains after closure.

Leachate - Any liquid, including its suspended components, that has percolated through or drained from hazardous waste.

Liability - The state of being legally responsible for property damage or bodily injury caused during the operation, closure, or post-closure phases of a hazardous waste management facility.

Liner - A continuous layer of natural or human-made materials beneath or on the sides of a surface impoundment, landfill, or landfill cell that restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

Listed Wastes - Hazardous wastes that have been placed on one of three lists developed by EPA: nonspecific source wastes, specific source wastes, or commercial chemical products. These lists were developed by examining different types of waste and chemical products to see if they exhibited one of the four characteristics in the statutory definition of hazardous waste, were acutely toxic or hazardous, or were otherwise toxic.

Manifest - The shipping document, EPA Form 8700-22, used to identify the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage, or disposal.

Metric Ton - 2200 pounds.

Monitoring - Methods used to inspect and collect data on a facility's operational parameters or on contiguous air, groundwater, surface-water, or soil quality.

Monitoring and Analysis Order - Used to evaluate the nature and extent of a substantial hazard to human health or the environment that exists at a TSD. It can be issued either to the current owner or to a previous owner or operator if the facility is not currently in operation or if the present owner could not be expected to have knowledge of the release potential.

MSDS - Material Safety Data Sheets. Standard information sheets that are provided by chemical manufacturers with their chemicals, identifying any hazards associated with the product and outlining ways to respond to accidental spills.

New Facility - A TSD that began operation or whose construction commenced after November 19, 1980.

Offsite - The opposite of onsite (see "Onsite").

One-Hundred-Year Flood Plain - Areas adjacent to streams where the probability of flooding in any given year is one in a hundred.

Onsite or On Site - An onsite location is on the same or geographically contiguous property, which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right(s)-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way controlled by that person and to which the public does not have access is also considered onsite property.

Operator - The person responsible for the overall operation of a facility.

Owner - The person who owns a facility or part of a facility.

Part A - The first part of the two-part application, which must be submitted by a TSD facility to receive a permit. It contains general facility information that is presented in a standard form.

Part B - The second part of the permit application, which includes detailed and highly technical information concerning the TSD in question. No standard form exists for the Part B; the facility must submit information based on the regulatory requirements.

Partial Closure - The closure of a discrete part of a facility in accordance with the applicable closure requirements of 40 CFR Parts 264 and 265. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell, or a pit while other parts of the same facility continue to operate or are placed in operation at some future time. A proposed redefinition was published in the March 19, 1985, Federal Register (40 CFR 11068).

Post-Closure Requirements - Monitoring and maintenance requirements for closed HWM units throughout the post-closure care period; these are specified as part of facility-specific permit conditions.

Permit - An authorization, license, or equivalent control document issued by EPA or an authorized State to implement the regulatory requirements of Subtitle C Parts 264 and 265, for TSD's. Permit does not include RCRA interim status or refer to any permit that has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Permit-by-Rule - A provision of Subtitle C whereby a facility is deemed to have a RCRA permit if it is permitted under the Safe Drinking Water Act; the Clean Water Act; or the Marine Protection, Research, and Sanctuaries Act and also meets a few additional Subtitle C requirements specified in 40 CFR Section 270.60.

Permit Requirements - Requirements in the RCRA permit, including ambient, performance, design, and/or operating standards contained in the regulations that the owner or operator must meet in perpetuity in constructing, operating, closing, and caring for the facility.

Person - An individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body.

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Policy - A document that specifies operating policies that must be followed. They are used by program offices to outline the manner in which pieces of the RCRA program are to be carried out.

RCRA - Abbreviation for the Resource Conservation and Recovery Act of 1976. What we commonly refer to as RCRA is an amendment of the first piece of legislation related to Federal solid waste, called the Solid Waste Disposal Act of 1965. RCRA was amended by HSWA in 1980 and most recently on November 8, 1984.

RCRIS - Abbreviation for the Resource Conservation and Recovery Act Information System, a database on RCRA facilities currently under development. This system will replace the Hazardous Waste Data Management System (HWDMS) currently in use.

Self Implementing Regulations - Regulations mandated by Congress which are similar in nature to a "hammer" in that they take effect automatically on a certain date unless EPA has developed its own regulations to supercede them.

Regional Administrator	- The highest ranking official in each of the 10 EPA Regions.
Regulation	- The legal mechanism that spells out how a statute's broad policy directives are to be carried out. Regulations are published in the Federal Register and then codified in the Code of Federal Regulations.
Regulatory Compliance	- Meeting the requirements of Federal or State regulations regarding facility design, construction, operation, performance, closure, and post-closure care.
Representative Sample	- A sample of a universe or whole (e.g., waste pile, lagoon, ground water, or waste stream) that can be expected to exhibit the average properties of the universe or whole.
Resource Recovery	- The recovery of material or energy from solid waste.
Soil Porosity	- The ratio of the volume of the pores between soil particles to the volume of the soil itself. Soil porosity is a function of the particles' grade, size, and form or type (shape). Determines the soil's physical condition at different moisture levels and its ability to retard or accelerate water and contaminant movement.
Solid Waste	- As defined in RCRA, solid waste refers to any garbage; refuse; sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. It does not include solid or dissolved material in domestic sewage; solid or dissolved materials in irrigation return flows; industrial discharges that are point sources subject to permits under the Clean Water Act; or special nuclear or byproduct material as defined by the Atomic Energy Act of 1954.
Solid Waste Disposal Act of 1965	- See "RCRA"
State	- Any of the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.
State Hazardous Waste Plan	- A scheme generated at the State level to deal with the management of hazardous waste generated, treated, stored, or disposed of within the State or transported outside the State.

Statute - The law, as passed by Congress and signed by the President.

Storage - The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

Superfund - See "CERCLA".

Surface Impoundment - A facility or part of a facility that is a natural topographic depression, human-made excavation, or diked area formed primarily of earthen materials (although it may be lined with human-made materials), that is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and that is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

SW-846 - Reference number for "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," a methods manual for the sampling and analysis of wastes.

Tank - A stationary device designed to contain an accumulation of hazardous waste; constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic), which provide structural support.

The Act - A shortened reference to the Resource Conservation and Recovery Act.

Thermal Treatment - The treatment of hazardous waste in a device that uses elevated temperatures as the primary means of changing the chemical, physical, or biological character or composition of the hazardous waste. Incineration is an example of thermal treatment.

Topographic Map - A map indicating surface elevations of an area through the use of contour lines. It also shows population centers and other cultural and land-use features, surface water drainage patterns, and forests. These maps enable quick identification of areas of slopes that are more suitable for sanitary landfills.

Totally Enclosed Treatment Facility - A facility for the treatment of hazardous waste that is directly connected to an industrial production process and that is constructed and operated in a manner that prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

Transfer Facility - Any transportation-related facility, including loading docks, parking areas, storage areas, and other similar areas, where shipments of hazardous waste are held during the normal course of transportation.

Transporter - Any person engaged in the offsite transportation of hazardous waste within the United States by air, rail, highway, or water, if such transportation requires a manifest under 40 CFR Part 262.

Treatment - Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it; to render it nonhazardous or less hazardous; to recover it; to make it safer to transport, store, or dispose of; or to make it amenable to recovery, storage, or volume reduction.

TSD Facility or TSDF - Abbreviation for treatment, storage, or disposal facility.

UN/NA Number - Hazardous material identification number assigned to chemicals, wastes, and other hazardous materials by DOT. Under DOT regulations, UN/NA numbers for all hazardous materials in a shipment must be listed on the shipping papers accompanying the shipments. For hazardous wastes, UN/NA numbers must be recorded on the Uniform Hazardous Waste Manifest accompanying all hazardous waste shipments under item 11 of the manifest, as part of the DOT description of the waste.

UN/NA numbers are listed by chemical or waste name in 49 CFR 172.101 and 102. Numbers bearing the prefix "UN" are associated with descriptions appropriate for international shipments as well as domestic shipments. Numbers bearing the prefix NA are associated with descriptions that are not recognized for international shipments, except to and from Canada.

Waste Management Practices - Refers to aspects of a facility's design, operation, and closure that ensure protection of human health and the environment while treating, storing, or disposing of hazardous wastes.

Waste Minimization - Refers to the reduction in the volume or quantity of hazardous waste by the waste generator, to the extent economically practicable.

Water Table - 1) The upper limit of the part of the soil or underlying rock material that is wholly saturated with water; 2) the upper surface of the zone of saturation in ground waters in which the hydrostatic pressure is equal to atmospheric pressure.

Wetlands - Bogs, swamps, marshes, tidal flats, or other areas inundated by ground or surface water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

Appendix III
Regulatory Requirement Synopsis and Inspection Procedures

SECTION		PAGE
Introduction		III-2
TABLE III-1	Part 262 - Generators	III-3
TABLE III-2	Part 263 - Transporters	III-28
TABLE III-3	Part 265 - Interim Status Facilities	III-40
TABLE III-4	Part 264 - Permitted Facilities	III-118
TABLE III-5	Part 266 - Specific Hazardous Wastes	III-156
TABLE III-6	Part 268 - Land Disposal Restrictions	III-170

Introduction to the Regulatory Requirement Synopsis and Inspection Procedures Sections.

This Table is organized into two sections that are to be used hand-in-hand. The RCRA regulations (40 CFR Parts 262, 263, 264, 265, 266 and 268) have been summarized in the Regulatory Requirement Synopsis which is presented on the left hand pages of the Table. Inspection procedures useful for verifying compliance with the regulations are presented on the right hand page.

The Regulatory Requirement Synopsis is designed as a quick reference. Therefore, the summaries state the key points of each regulation for the inspector. **These key points are not a substitute for reading the entire regulation**.

The Inspection Procedures are presented in a bulleted format in order to identify important concerns and areas that might otherwise be overlooked. When an in-depth description of the inspection procedures is necessary, a few detailed paragraphs are provided to clarify these circumstances.

Once again, when inspecting permitted facilities, the permit conditions drive any inspection. The inspection of permitted facilities is covered in depth in Chapter 3.

There is also additional space on the inspection procedure pages to write in your own or additional inspection procedures.

TABLE III-1 Generator Regulatory Requirement Synopsis

Regulatory Requirement Synopsis - Identification of Hazardous Waste

---

§261.2 Definition of Solid Waste (August 20, 1985)

(a)(1) A solid waste is any discarded material that is not excluded.

(2) Discarded is abandoned (disposed of, burned, stored or treated prior to disposal), recycled or inherently waste-like.

(c)(1) Recycled materials are solid wastes if they are used in a manner constituting disposal such as applied on land or used in products applied on the land if that is not their ordinary manner of use.

(c)(2) Recycled materials are solid waste if they are burned to recover energy or used to produce a fuel.

(c)(3) The following materials are solid wastes when reclaimed: spent materials, listed sludges and by-products and scrap metal.

(c)(4) Recycled materials are solid wastes if they are accumulated speculatively except for listed commercial chemical products.

(e)(1) Recycled materials are not solid waste when they are used as ingredients in an industrial process

(f) Claims that materials are not solid waste or are conditionally exempt must be documented.

§261.3 Definition of Hazardous Waste (November 29, 1985)

(a)(1&2) A solid waste is a hazardous waste if it is not excluded and it meets any of the following criteria:

(i) exhibits characteristics of hazardous waste

(ii) is listed in Subpart D

(iii) is a mixture of a solid waste and a hazardous waste unless the mixture no longer exhibits the characteristic of the hazardous waste or is wastewater discharged under the Clean Water Act.

(c)(2) Any solid waste generated from the treatment or disposal of a hazardous waste is a hazardous waste.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Identification of Hazardous Waste

---

§261.4 Exclusions (July 14, 1986)

(a)(1) Domestic Sewage
(2) Actual discharge of industrial wastewater under the Clean Water Act.
(3) Irrigation return flows
(4) Special nuclear or byproduct material
(5) Materials subject to in-situ mining techniques
(6) Pulping liquors that are reclaimed in a pulping furnace
(7) Spent sulfuric acid used to produce virgin sulfuric acid
(8) Secondary materials that are reclaimed and returned to the original process

(b)(1) Household waste
(2) Agricultural waste
(3) Mining overburden
(4) Ash from combustion of coal
(5) Drilling fluids and other wastes associated with the production of oil and gas
(6) Wastes failing the EP toxicity test for chromium if the chromium is in the trivalent state
(7) Solid waste from the extraction, beneficiation and processing of ores and minerals
(8) Cement kiln dust
(9) Arsenical-treated wood or wood products used as intended

Inspection Procedures - Sections 261.2 through 261.4

Prior to an inspection, be familiar with the processes occurring at the facility. The determination of what material is a hazardous waste subject to regulation under Subtitle C of RCRA is the meat of any inspection. The generator must determine if a material is a hazardous waste, however, the inspector must substantiate the determination. Therefore it is essential that the inspector knows the definitions and exceptions for hazardous waste. Information on waste generation at specific industries should be consulted when needed.

During the inspection, the inspector should ask about the wastes that are typically generated during processes found onsite. The inspector should confirm that listed wastes are managed as hazardous waste and verify that generators have tested wastes that are suspected of exhibiting hazardous characteristics. The inspector should be aware of determinations such as 'recycled materials' and 'not hazardous' unless documentation is provided.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Manifest Review

---

§262.11 Hazardous Waste Determination (November 19, 1980)

The generator must determine that a waste is hazardous by checking the following:

(a) Is the waste excluded?
(b) Is the waste listed as hazardous in Subpart D?
(c) Does the waste meet the characteristics of hazardous waste as determined by testing or by knowledge of the materials and processes used.

§262.12 EPA Identification Numbers (May 19, 1980)

(a) A generator without an EPA identification number must not treat, store, dispose of, or offer for transportation hazardous waste.

(c) A generator must not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

§262.20 General Requirements (March 24, 1986)

(a) A manifest must be prepared before a generator transports or offers for transportation, hazardous waste for offsite treatment, storage, or disposal.

(b) A generator must designate on the manifest one facility that is permitted to handle the waste described on the manifest.

(c) A generator may designate one alternate facility in the event that an emergency prevents delivery to the primary designated facility.

(e) An exception applies to generators of greater than 100 kg but less than 1000 kg in a month where:

(1) The waste is reclaimed under contractual agreement and

(i) The type of waste and frequency of shipments are specified;

(ii) The vehicle used to transport the waste and deliver the regenerated material back to the generator is owned by the reclaimer;

(2) The generator maintains a copy of the agreement for at least three years.

Regulatory Requirement Synopsis - Manifest Review (continued)

---

§262.21 **Acquisition of Manifests** (March 20, 1984)

(a) If the consignment State supplies manifest forms and requires its use, the generator must use that manifest.

(b) If the consignment State does not supply the manifest, but the generator State does, the generator must use that State's manifest.

§262.22 **Number of Copies** (May 19, 1980)

The manifest consists of sufficient copies to provide the generator, each transporter, and the designated facility with one copy plus one additional copy to be returned to the generator.

§262.23 **Use of the Manifest** (December 31, 1980)

(a) The generator must: (1) Sign the manifest; and

(2) Obtain signature and date of acceptance from initial transporter;and

(3) Retain one copy for three years or until the designated facility returns the signed copy which will be retained for three years.

(b) The generator must give the transporter the remaining copies, or

(c) For bulk shipments within the US solely by water, the generator must send three signed and dated copies of the manifest to the designated facility or to the last water transporter if exported by water.

(d) For rail shipments within the US, the generator must send three signed and dated copies to:

(i) the next non-rail transporter, or

(ii) the designated facility if transported solely by rail, or

(iii) the last rail transporter to handle waste if exported.

§262.40 **Record Keeping** (January 28, 1983)

A generator must keep a signed manifest until the signed copy is returned from the designated facility. All return-receipt copies, Biennial Reports, Exception Reports, and records with test results and waste analyses must be kept for three years. This time period is automatically extended during the course of any unresolved enforcement action.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Sections 262.12 through 262.23 and 262.40

- Has each original in the generator's file of manifests been signed and dated by the generator and the first transporter? Is the EPA identification number clearly marked for the generator, the transporter and the designated facility?

- Have all appropriate spaces been filled out correctly, and all changes and cross-outs on the manifest been properly initialed?

- Have the generator's manifest files been carefully reviewed to be sure that all shipments have been disposed of at a designated facility? After 35 days from when the waste was accepted by the initial transporter (See Section 262.42), the designated facility should return the copy of the manifest with the signature of the designated facility's owner/operator. The generator must keep this copy on file for three years and may discard the original. The return receipts for waste shipments must be kept on file for three years.

The receipt of the waste by the designated facility should be verified by observing the date on the originals. If 35 days have expired, the generator should have the return receipt from the designated facility. If not, the generator must have started exception reporting procedures.

The inspector should be aware that all State manifests do not look alike and that some State waste codes are different from EPA waste codes. If waste is transported periodically, e.g. during the first week of each month, check to see if originals or return receipts are on file for each anticipated shipment date. Obtain explanations for unusual gaps in the frequency of offsite shipment. Are subsequent shipments larger? Has the 90 day storage limit (see §262.34) been exceeded for facilities without storage permits?

Although the generator must determine if a waste is hazardous, the inspector should use his knowledge of the processes conducted at a facility in order to verify that the determination of hazardous wastes is appropriate and that any hazardous waste shipped offsite is manifested. The inspector may need to sample the waste or to review all the appropriate information back in the office in order to properly evaluate the generator's determination. The generator, however, does not have to have an analysis of the waste to make his determination.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Correlation with Applicable DOT Regulations

---

§262.30 Packaging (May 19, 1980)

Hazardous waste containers must meet DOT standards specified in 49 CFR 173 (General requirements for shipments and packaging), 178 (Shipping container specifications) and 179 (Specifications for tank cars).

§262.31 Labeling, §262.32 Marking (May 19, 1980)

Before any off-site transportation, containers of hazardous waste must be marked and labeled according to 49 CFR 172 (see Hazardous Waste Tables). The following words must be printed on each container of less than 110 gallons, in durable lettering or on a label or tag:

> HAZARDOUS WASTE-Federal Law Prohibits Improper Disposal. If found contact the nearest police or public safety authority or the U.S. EPA.
>
> Generator's name and address
> Manifest Document Number

§262.33 Placarding (May 19, 1980)

Placards must be provided in accordance with DOT regulations for hazardous materials under 49 CFR 172, Subpart F - Placarding.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Section 262.30 through 262.33

- Are any containers damaged, corroded or leaking?
- Does each container have an appropriate DOT label, the manifest number and the generator's name and address?
- Is an appropriate placard placed on each motor vehicle, freight container or rail car? (Note that there are exceptions to this requirement for certain classes such as ORM-A,B,C,D or E material).

DOT regulations, Sections 178 and 179, concern shipping containers and tank car specifications for the design of the container or the tank car and are beyond the scope of most RCRA inspections. The DOT requirements, sections 172 and 173 for shipping and packaging, organizes materials according to their hazard classification and specifically describes the packaging requirements for each chemical or classification of chemicals. Since hazardous wastes can be gases as well as liquids or solids, and can be shipped in bulk as well as in small quantities by container, familiarity with the generated waste characteristics and the DOT hazard classification of the waste prior to the inspection will be helpful to the inspector. A review of the specific DOT container requirements should be part of the inspection file review if there is concern that the generator may not be meeting DOT requirements.

DOT's Hazardous Waste Tables identify the labeling requirements for hazardous substances. The label category, ORM-E, applies to most hazardous waste mixtures that do not meet the definition of a hazardous substance for labeling purposes. DOT requirements change frequently, and the inspector should try to obtain the current requirements from Regional DOT experts. State regulations are often more stringent and the inspector should be aware of those circumstances.

Ideally the inspector should verify that each container transported is labeled and marked properly. However, the inspector usually will not be present when a shipment is ready. Compliance with these requirements can be ascertained by questioning the facility representative. In cases where placards are required, the generator can be requested to produce them. The presence of printed hazardous waste labels usually means that the generator places them on the containers prior to shipment off-site.

Regulatory Requirement Synopsis - Accumulation Time, Basic Requirements

---

§262.34 Accumulation Time (September 22, 1986)

(a) A generator may accumulate hazardous waste on site without a permit for 90 days or less, provided that:

(1) The waste is placed in containers that meet DOT standards and the generator complies with Subpart I, for containers, or Subpart J, for tanks, of Part 265. (Except for 265.197(c) and 265.200. Such a generator is exempt from al the requirements in Subparts G and H of 265, except for 265.11 and 265.114).

(2) The date upon which accumulation begins is marked upon each container,

(3) Each container and tank is labeled "hazardous waste"

(4) The operator complies with Preparedness and Prevention and Contingency Plan and Emergency Procedures (see §265, Subparts C and D), and with 265.16 (Personnel Training)

(b) A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and must obtain interim status and apply for a permit unless he has been granted an extension by the Regional Administrator.

(c)(1) A generator may accumulate up to 55 gallons of hazardous waste and one quart of acutely hazardous waste at a place near the point of generation and is not required to obtain a permit or interim status if he:

(i) Complies with §265.171 (condition of containers), §265.172 (compatibility), and §265.173 (management of containers).

(ii) Marks the containers with the words "hazardous waste"

(2) If he exceeds this amount, the generator has 3 days to comply with paragraph (a) above.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Sections 262.34 (a)(b)(c)

- Is each container and tank marked as "hazardous waste"?
- Do containers have the starting date for the accumulation period marked on the container? The date should not be more than 90 days from the date of the inspection unless the generator meets the conditions of §262.34(c) or has an extension.
- Since tanks are not required to have the starting date marked on them because they are reused, the generator must show through records and manifests that the tank has been emptied within 90 days. This should be verified for several previous waste shipments.
- Facilities generating less than 100 kg/month are conditionally exempt small quantity generators (SQGs).
- Have satellite accumulation centers (Section c) been inspected to insure that they have not exceeded a combined volume of 55 gallons of all hazardous waste or one quart of acutely hazardous waste?
- Are there any satellite accumulation areas not identified by the generator which are visible during the walkthrough inspection?
- Are satellite accumulation centers near the point of generation and at the control of an operator close by?

Additional requirements to comply with applicable parts of §265 and the inspection procedures will be covered in Table III-4. Please refer to these sections when necessary.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Accumulation Time, Small Quantity Generators

---

§262.34 Accumulation Time (September 22, 1986)

(d) A small quantity generator (SQG) who accumulates greater than 100 kg but less than 1000 kg of waste in a calendar month may accumulate waste on site for 180 days without a permit or interim status provided that:

(1) Waste quantity never exceeds 6000 kilograms on site.

(2)(3) The generator complies with paragraphs (a)(1),(a)(2),(a)(3) of this section. (Except for §265.176).

(4) The generator complies with the following:

(i) There is at least one employee on the premises or on call as emergency coordinator;

(ii) The following information is posted next to the telephone:

(A) Name and telephone number of emergency coordinator,
(B) Location of fire extinguishers, spill control material and fire alarm, and
(C) Telephone number of fire department unless facility has direct alarm.

(iii) Generator must ensure that all employees are familiar with waste handling and emergency procedures; and

(iv) Emergency coordinator must respond appropriately in the event of a fire, spill or release to the environment. Any releases to surface water must be reported to the National Response Center.

(e) A small quantity generator (SQG) may accumulate waste on site for 270 days without a permit or interim status if the waste must be transported over 200 miles for off site storage, disposal or treatment.

(f) A small quantity generator (SQG) who accumulates waste on site over the allowable number of days or over 6000 kg must obtain interim status and apply for a permit or apply for an extension from the Regional Administrator.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Section 262.34

- Have you confirmed that generators who claim to be SQGs are not generating more than the limit for SQGs? This may be done by looking at the manifests for quantities and doing a mass balance to convert to probable weight (see below).

- Has the generator exceeded the 180 day time period without shipping the waste over 200 miles? The manifests should provide the location of the designated facility.

- Do not confuse SQG regulations with the regular generator regulations!

The inspector should calculate the maximum quantity of hazardous waste in containers based upon storage volumes of tanks. Based upon the waste characteristics, the density of the waste (Water weighs 8.34lbs or 3.79 kg /gal.) and the volume available for waste storage, calculate the total quantity of waste observed. This quantity must not exceed 6000 kg unless the facility has interim status, a permit, or an emergency extension. In the case of tanks, where the maximum volume will exceed the 6000 kg limit but the actual waste quantity is less, note this circumstance. Even though it is not a current violation, it is a good idea to mention the potential to the generator.

When inspecting generators that produce small quantity wastes, verify that the SQG meets the requirements for posting the appropriate phone numbers and providing employee training. During the visual inspection, check for evidence of spills or other releases or the potential for releases.

Regulatory Requirement Synopsis - Recordkeeping and Reporting

---

§262.41 Biennial Report (July 15, 1985)

A generator, except SQG, who ships any hazardous waste off site must submit a Biennial Report to the Regional Administrator by March 1 of even-numbered years. Biennial Reports (EPA form 8700-13A) must cover generator activities during the previous year and must include:

(1) EPA ID number, name, and address of the generator.

(2) The calender year covered by the report.

(3) The EPA ID number, name, and address for each off site facility to which waste was shipped.

(4) The EPA ID number, name and address for each transporter used.

(5) A description, EPA hazardous waste number, DOT hazard class, and quantity of each hazardous waste shipped offsite to a facility in the U.S. Information must be listed by EPA ID number of each facility to which waste was shipped.

(6) A description of the efforts undertaken during the year to reduce volume and toxicity of waste generated.

(7) A description of the changes in volume and toxicity of waste actually achieved during the year compared to previous years.

(8) The certification signed by the generator or authorized representative.

(b) A generator who manages waste on site must submit a Biennial Report covering those wastes in accordance with §§270, 264, 256 and 266. Reporting for exports is not required.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Section 262.41

- Is the generator's Biennial Report available? Although the generator is not required to have it on site, if it is available, review the contents for completeness. If the reports are not available on site, the inspector can review them in the State or Regional office.
- In most cases, State annual reports are accepted in lieu of the U.S. EPA biennial reports.
- Review waste minimization practices and compare recycling practices with the nature of the waste to verify that these practices are consistent for the wastes generated.

Regulatory Requirement Synopsis - Exception and Additional Reporting

---

§262.42 Exception Reporting (May 19, 1980)

(a) A generator who does not receive the return copy of the manifest with the handwritten signature of the owner/operator of the designated facility within 35 days of the date the waste was initially accepted by the first transporter, must determine the status of the waste.

(b) A generator must submit an Exception Report to the Regional Administrator if he has not received the signed return-copy of the manifest within 45 days. Exception Reports must include:

(1) A legible copy of the original manifest.

(2) A letter signed by the generator explaining the efforts taken to locate the hazardous waste and the results of those efforts.

§262.43 Additional Reporting (May 19, 1980)

The Administrator may require generators to furnish additional reports concerning the quantities and disposition of hazardous wastes.

§262.44 Generators of 100-1000 kg/Month

Such generators are exempted from this subpart, except for recordkeeping and exception reporting requirements.

§262.51 Farmers (April 1, 1983)

A farmer disposing of waste pesticides from his own use is not required to comply with the standards in this Part provided he triple rinses each emptied pesticide container and disposes of the residues on his own farm in a manner consistent with the instructions on the label.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Sections 262.42 through 262.43

- Many States require that a signed manifest be returned to the generator prior to 35 days after shipment.
- Are any additional reports required by the Regional Administrator? Verify these reports if applicable.

During the review of the generator's manifest file, if the inspector finds records of waste shipments (original manifests) that do not have a signed return copy of the manifest on file within 35 days of the date of the off site shipment, he should find documentation that the generator has made efforts to locate the waste and has filed the Exception Report within 45 days of shipment. Even small quantity generators must file Exception Reports in a timely manner for waste shipments initiated after March 23, 1988.

Regulatory Requirement Synopsis - Exporter of Hazardous Waste -Requirements

§262.52 General Requirements (August 8, 1986)

In order to export hazardous waste, the exporter must:

(a) Provide notification to EPA

(b) The receiving country must consent to receive hazardous waste

(c) Attach a copy of the EPA Acknowledgement of Consent to the manifest

(d) Conform to the conditions of the country's written consent

§262.53 Notification of Intent to Export (August 8, 1986)

A primary exporter of hazardous waste must notify EPA of the intent to export this waste at least 60 days before the initial shipment. The notification may cover a period of 12 months or less. The notification must include:

(1) Name, mailing address, telephone number, and EPA ID of exporter;

(2i) A description of the hazardous waste and EPA ID number, DOT shipping name, hazard class, and UN/NA number;

(2ii) Frequency of export and time period;

(2iii) Estimated quantity;

(2iv) All points of entry and departure from each country through which the waste must pass;

(2v) Description of the mode of transportation and type of container;

(2vi) Description of the manner of waste management in the receiving country;

(2vii) Name and site address of consignee; and

(2viii) Name of transit country and length of time remaining there.

Inspection Procedures - Parts 262.52 and 262.53

The central objective of an inspection is to identify all potentially hazardous waste material that is being exported instead of focusing on exports of hazardous wastes that are already identified. The inspector should ask if any recycled material is being exported and whether any evaluation has been made to determine if the material is hazardous per Part 261.

The inspector should verify that the exporter has filed the Notification of Intent to Export within the required 60 day period before the initial shipment and that the notification is complete. A notification is necessary for any exported wastes that are hazardous.

The inspector should remember that:

- Bilateral international agreements have been signed with Canada and Mexico that impose slightly different requirements that are analogous to a permit or license system.
- The hazardous waste export program is a US EPA program that will not be delegated to the States.
- All exports of materials (including hazardous waste) with a value exceeding $1500 are required to prepare a Shipper's Export Declaration (SED) indicating the number and type of containers, the type of material (as indicated by classification codes established by the Census Bureau), the units and weight of the shipments, and the value. Most exports of hazardous waste for disposal would not require an SED. Conversely, exports of listed hazardous waste to be recycled would frequently exceed $1500 in value and would require a SED. The SED may be an important ancillary source or information on cases involving suspected sham recycling. Failure to file an SED or falsifying information on an SED are enforceable violations under Census Bureau regulations. The inspector should verify that the primary exporter has filed an SED for recycled materials. If no SED has been filed, further investigation into recycling activities should be conducted.

Regulatory Requirement Synopsis - Exporter of Hazardous Waste -Requirements

---

§262.54 Special Manifest Requirements (August 8, 1986)

(a,b) The primary exporter must enter the name and site address of the consignee and alternate in place of the designated facility and alternate

(c) Primary exporter must identify the point of departure from the U.S.

(d) The following must be added to Item 16 of the Manifest: "and conforms to the terms of the attached EPA Acknowledgment of Consent."

(f) The primary exporter must require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies between the manifest and the shipment.

(g) If a shipment cannot be delivered to the designated or alternate consignee, the primary exporter must:

(1) Renotify EPA to allow shipment to a new consignee and obtain an EPA Acknowledgment of Consent prior to delivery; or

(2,3) Instruct the transporter to return the waste to the primary exporter or designate another facility within the United States; and revise the manifest in accordance with the primary exporter's instructions.

(h) The primary exporter must attach a copy of the EPA Acknowledgment of Consent to the manifest that must accompany the hazardous waste shipment.

(i) The primary exporter must provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste leaves the United States.

§262.55 Exception Reports (August 8, 1986)

A primary exporter must file an Exception Report with the Administrator if:

(a) He has not received a copy of the manifest signed by the transporter stating the date and place of departure from the U.S. within 45 days

(b) The primary exporter has not received written confirmation from the consignee that the hazardous waste was received within 90 days;

(c) The waste was returned to the U.S.

Inspection Procedures - Parts 262.54, 262.55 and 262.57

- Has the exporter's file been reviewed? The correct information should be included on all required reports and manifests. Some points that may be overlooked but are required are as follows: the point of departure from the U.S. and the additional certification statement included on Item 16 of the manifest.

- Has the transporter returned a signed copy of the manifest with the date and place of departure within 45 days or that the exporter has filed an Exception Report for each export of waste?

- Has the primary exporter provided an extra copy of the manifest to the transporter for delivery to the U.S. Customs official at the point of departure from the U.S.?

- Does the generator produce spent solvents, wastes containing heavy metals, or materials contaminated with solvents or metals? Since these materials represent a large percentage of exported wastes, the inspector should pay careful attention to how they are being disposed.

- Are wastes generated on-site and recycled off-site? If so, verify the location of the ultimate recycling facility.

- Is the generator in Regions I, II, III, or V? If so, exports should be carefully checked, as more than 90% of waste exports originate in these Regions.

Before export, the exporter must have EPA Acknowledgement of Consent, and a copy must accompany each shipment with the manifest. If the exporter is using a broker, the inspector should question the nature of the arrangements made in order to verify that the export requirements will be met.

After 90 days from when the waste was accepted by the initial transporter, the consignee must confirm in writing the delivery of the waste. The signed copy of the manifest may be used as the confirmation, but other documents are acceptable. Compliance with the 90 day time period should be verified by observing the date on the manifests. If 90 days have expired from the date of shipment, the exporter should have written confirmation from the consignee. If not, the exporter must have started exception reporting procedures.

The exporter must renotify EPA during exception reporting and obtain a revised EPA Acknowledgement of Consent. The inspector should verify that the exporter has obtained the revised Acknowledgement of Consent, which must be kept on file for three years.

The ultimate TSDF in a receiving country is defined as the consignee and is not required to have a US EPA ID number. However, the primary exporter must enter the name and site address of the consignee on the manifest.

Regulatory Requirement Synopsis - Exporter of Hazardous Waste - Annual Reports

§262.57 Recordkeeping (August 8, 1986)

The exporter must keep a copy of each notification of intent to export, EPA Acknowledgement of Consent, confirmation of delivery and annual report for at least three years.

§262.56 Annual Reports (August 8, 1986)

(a) By March 1 of each year, primary exporters of hazardous waste must file with the Administrator a report summarizing hazardous waste export activity during the previous calendar year. Such reports shall include the following:

(1) The EPA ID number and the name, mailing address, and site address of the exporter;

(2) The calendar year covered by the report;

(3) The name and site address of each consignee;

(4) For each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number, the DOT hazard class, the name and EPA ID number for each transporter used, the total amount of waste shipped, and the number of shipments, pursuant to each notification;

(5) Except for Exporters of 100 kg but less than 1000 kg of wastes per month the following must be included:

(i) A description of the efforts undertaken during the year to reduce the volume and toxicity waste generated;

(ii) A description of the changes in volume and toxicity of waste achieved during the year compared with previous years,

(6) A certification signed by the primary exporter.

Inspection Procedures - Section 262.56

- Has the exporter, except for small quantity exporters (greater than 100 kg but less than 1000 kg per month) have filed an Annual Report? Does that report include the required items as listed in 262.56 (a) 1-6 provided above?

The inspector should remember that small quantity exporters must file reports in even-numbered years only.

Regulatory Requirement Synopsis - Importer - Manifest Review

---

§262.60 Imports of Hazardous Waste (August 8, 1986)

(a,b,c) Importers of hazardous waste must meet the manifest requirements of 262.20 except that the foreign generator's name and address and the importer's name, address and EPA ID number must be included in place of the generator's information and the importer or his agent must sign and date and obtain the initial transport's signature on the manifest.

TABLE III-1 Generator Regulatory Requirement Synopsis (continued)

Inspection Procedures - Section 262.60

- Are the required information and signatures provided on the manifests?

Table III-2 Transporters Regulatory Requirement Synopsis

Regulatory Requirement Synopsis - Transporters - General Requirements

---

§263.11 EPA Identification Number (May 19, 1980)

(a) A transporter must not transport hazardous wastes without an EPA ID.

§263.12 Transfer Facility Requirements (April 1, 1983)

(a) A transporter who stores manifested shipments of hazardous waste in containers for a period of 10 days or less is not subject to regulation under Parts 270, 264, 265, and 268.

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Inspection Procedures - Sections 263.11 and 263.12

- Has the transporter obtained an EPA identification number? Is the transporter using the correct number? Verify by checking manifests or copies of manifests in the transporter's possession.

- How long has any waste shipment been stored at a transfer facility by the transporter?

If waste is stored more than 10 days the transporter must comply with the requirements for storage, treatment and disposal facilities. The inspector can check the dates on the manifest in order to determine the date when the waste was accepted by the transporter. After accounting for a reasonable travel time to reach the transfer station, the inspector can determine if the waste has been held at the transfer station for more than 10 days.

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Transporters - Manifest System

---

§263.20 The Manifest System (March 24, 1986)

(a) A transporter may not accept hazardous waste from a generator unless the waste is accompanied by a manifest signed by the generator.

(b) Before transporting the hazardous waste, the transporter must sign and date the manifest, acknowledging acceptance of the hazardous waste from the generator. The transporter must return a signed copy to the generator before leaving the generator's property.

(c) The transporter must ensure that the manifest accompanies the hazardous waste.

(d) A transporter who delivers a hazardous waste to another transporter or to the designated facility must:

(1) Obtain the date of delivery and the signature of that transporter or of the owner or operator of the designated facility on the manifest;

(2) Retain one copy of the manifest

(3) Give the remaining copies of the manifest to the accepting transporter or designated facility.

§263.22 (a) Recordkeeping (December 31, 1980)

(a) A transporter of hazardous waste must keep a signed copy of the manifest for a period of three years.

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Inspection Procedures Section 263.20 and 263.22(a)

- Does an appropriately signed manifest accompany each shipment of waste (see exceptions for bulk shipments)?

When transporting drums by truck, transporters will often combine shipments from several generators located along an established route, and each shipment must have its own manifest. However, most inspectors will have limited access to shipments in route and must usually focus on a review of manifest files in order to verify that each shipment has a correctly filled and signed manifest.

Regulatory Requirement Synopsis - Transporters - Bulk Shipments by Water

---

§263.20 (e) (1-5) **Bulk Shipment by Water** (March 24, 1986)

(e)(1) The transport of hazardous waste delivered by water (bulk shipment) to the designated facility must obey the following procedure:

(2) A shipping paper containing all the information required on the manifest (excluding the EPA ID numbers, generator certification, and signatures) must accompany the hazardous waste; and

(3) The delivering transporter must obtain the date of delivery and signature of the owner or operator of the designated facility on either the manifest or the shipping paper; and

(4) The person delivering the hazardous waste to the initial water (bulk shipment) transporter must obtain the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forward it to the designated facility; and

(5) A copy of the shipping paper or manifest must be retained by each water (bulk shipment) transporter.

§263.22 (b) **Recordkeeping** (December 31, 1980)

(b) For shipments delivered to the designated facility by water (bulk shipments), each water (bulk shipment) transporter must retain a copy of a shipping paper containing all the information.

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Inspection Procedures - Sections 263.20 (e) and 263.22 (b)

- Are shipping papers used in lieu of manifests? Remember that bulk transporters by water can use shipping papers in lieu of manifests.
- When such papers are used, do they contain the name, address, and phone number of the generator; and the name and address of the transporter(s) and the designated facility?
- Has the transporter retained a copy of the shipping paper or manifest for each shipment for three years?

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Transporters - Bulk Shipment by Rail

---

§263.20 (f) (1-5) Bulk Shipments by Rail (March 24, 1986)

(f)(1) When accepting hazardous waste from a non-rail transporter, the initial rail transporter must:

(ii) Return a signed copy of the manifest to the nonrail transporter;

(iii) Forward at least three copies of the manifest to:

(A) The next nonrail transporter, if any; or,

(B) The designated facility, if the shipment is delivered to that facility by rail; or

(C) The last rail transporter designated to handle the waste in the United States; and

(iv) Retain one copy of the manifest and rail shipping paper.

(2) Rail transporters must ensure that a shipping paper containing all the information required on the manifest (excluding the EPA ID numbers, generator certification, and signatures) accompanies the hazardous waste at all times.

(3) When delivering hazardous waste to the designated facility, a rail transporter must:

(i) Obtain the date of delivery and the signature of the owner or operator of the designated facility on the manifest or the shipping paper (if the manifest has not been received by the facility); and

(ii) Retain a copy of the manifest or signed shipping paper.

(4) When delivering hazardous waste to a nonrail transporter, a rail transporter must:

(i) Obtain the date of delivery and the signature of the next nonrail transporter on the manifest; and

(ii) Retain a copy of the manifest.

Regulatory Requirement Synopsis - Transporters - Bulk Shipment by Rail (continued)

---

§263.20 (f) (1-5) Bulk Shipments by Rail (March 24, 1986)

(5) Before accepting hazardous waste from a rail transporter, a nonrail transporter must sign and date the manifest and provide a copy to the rail transporter.

§263.22 (c) **Recordkeeping** (December 31, 1980)

(c) For shipments of hazardous waste by rail within the United States:

(1) The initial rail transporter must keep a copy of the manifest and shipping paper with all the information.

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Inspection Procedures - Sections 263.20 (f) and 263.22 (c)

- Are shipping papers, rather than manifests, accompanying each shipment? Note that bulk transporters by rail may forward the manifest and use shipping papers instead to accompany each shipment.
- Do all shipping papers contain the name, address, and phone number of the generator, and the name and address of the transporters and of the designated facility?
- Has the rail transporter retained a signed copy of the shipping papers and manifest for three years?

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Transporters - Bulk Shipment by Rail

---

§263.20 (g) Export of Hazardous Waste (March 24, 1986)

(g) A transporter who transports hazardous waste out of the United States must:

(1) Indicate on the manifest the date the hazardous waste left the United States;

(2) Sign the manifest and retain one copy; and

(3) Return a signed copy of the manifest to the generator.

(a) The transporter must deliver the entire quantity of hazardous waste that he has accepted from a generator or a transporter to:

(1) The designated facility listed on the manifest; or

(2) The alternate designated facility, if the hazardous waste cannot be delivered to the designated facility because of an emergency situation; or

(3) The next designated transporter; or

(4) The place outside the United States designated by the generator.

(b) If the hazardous waste cannot be delivered in accordance with paragraph (a) of this section, the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

TABLE III-2 Transporters Regulatory Requirement Synopsis (continued)

Inspection Procedures - Section 263.20 (g)

- Do all manifests on file with transporters who ship outside the U.S. include the date the waste left the U.S., as well as all general information?
- Has the transporter retained a signed copy of a manifest for each shipment for three years?

TABLE III-3 Interim Status Regulatory Requirement Synopsis

Regulatory Requirement Synopsis - General Facility Standards

---

§265.1 Purpose, Scope, and Applicability (July 15, 1985)

(c) The requirements of this part do not apply to:

(1) Ocean disposal subject to permit

(2) Underground injection subject to a permit

(3) Owner or operator of a POTW

(4) Storage, treatment or disposal of hazardous waste in a State authorized under RCRA Part 271 (State requirements apply instead.)

(5) Facilities that only manage excluded hazardous waste

(6) Facilities managing recyclable materials

(7) A generator accumulating waste on site in compliance with 262.34

(8) A farmer disposing of waste pesticides from his own use

(9) Totally enclosed treatment facilities

(10) An elementary neutralization unit or waste water treatment unit as defined in 260.10

(11) Treatment of containment activities following a release of hazardous waste or material

(12) Transporters holding waste at transfer facilities for less than 10 days

§265.11 Identification (ID) Number (May 19, 1980)

Every facility owner or operator must have an EPA identification number.

§265.12 Required Notice (January 31, 1985)

(a) The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the Regional Administrator in writing at least four weeks in advance of the date that the waste is expected to arrive at the facility.

(b) Before transferring ownership or operational control the owner or operator must notify the new o/o in writing of these requirements.

Inspection Procedures - Sections 265.1, 265.11 and 265.12

- Does the TSDF have an identification number, and is the number being used appropriately on manifests, required reports, notifications, and other necessary documents?

- Are all exemptions or excluded units appropriately excluded? Review processes at any facility in order to confirm that any exemptions or excluded units are appropriate.

During the inspection, the inspector should ask the owner/operator if they accept shipments of foreign wastes or other recycled materials, and whether these wastes have been evaluated to see if they meet the criteria in Part 261. The inspector should identify all foreign generated wastes received at the site and verify that the waste corresponds with the notices that have been filed. Receiving any foreign hazardous waste without filing the notice appropriately constitutes a violation.

- Are copies of all notices are retained in a facility's operating record?

Regulatory Requirement Synopsis - General Waste Analysis

---

§265.13 General Waste Analysis (April 30, 1985)

(a)(1) Before an owner or operator manages any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a). The plan must specify:

(1) The parameters for which each hazardous waste will be analyzed;

(2) The test methods which will be used to test for these parameters;

(3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed;

(4) The frequency with which the initial analysis of the waste will be repeated;

(5) For off-site facilities, the waste analysis that hazardous waste generators have agreed to supply; and

(6) The methods which will be used to meet the additional waste analysis requirements for specific waste management methods.

(c) For off-site facilities, the waste analysis plan required in paragraph (b) of this section must also specify the procedures which will be used to inspect and analyze each movement of hazardous waste received at the facility.

Inspection Procedures - Section 265.13

- Review the facility's written waste analysis plan before checking the file of waste analyses.
- Methods described in Part 261 and SW 846 are acceptable for sampling and analysis.
- The waste analyses plan must be adequate for determining whether a waste is subject to the land disposal ban.
- Generators storing waste onsite for more than 90 days must have a waste analysis plan

If more than one waste analysis plan exists or existed, determine the applicability of each plan with respect to the time frame of the inspection and which plan is currently in effect. The plans for offsite facilities may define different waste analysis criteria for the types of waste it is currently accepting. It is a good idea to prepare lists of the various wastes handled at the facility prior to examination of the records.

Offsite facilities must have procedures to verify that the waste matches the identity of the waste on the manifest by inspecting each waste movement and performing analysis when the actual wastes are suspected to be different from the waste identified on the manifest. It is the inspector's responsibility to determine if the facility's plan is adequate and adhered to. This includes reviewing the waste analysis procedures to see if they can identify all the characteristics of the anticipated waste types. When pre-acceptance determinations are made through actual testing, inspection of the laboratory facility may be called for.

If the waste analysis plan is adequate, the inspector should verify that the waste analysis is performed for each waste stored over 90 days in the manner required and specified in the plan. Records of the analyses must be kept on file as part of the operating record.

Inspectors must be on the lookout for wastes or waste streams that have not been tested. This is particularly important at facilities where wastes are generated and disposed of onsite, and where records or analyses necessary for offsite disposal are not required. If an owner/operator maintains that a particular waste has not been tested because it is not hazardous, he must provide justification, such as Material Safety Data Sheet forms or process information providing waste content, to support this determination.

Regulatory Requirement Synopsis - Security

---

§265.14 Security (May 19, 1980)

(a) The owner or operator must prevent unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility.

(b) Unless exempt, a facility must have:

- (1) A 24 hour surveillance system or
- (2)(i) An artificial or natural barrier which completely surrounds the facility; and
- (ii) A means to control entry, at all times, through the gates or other entrances

(c) Unless exempt, a sign with the legend, "Danger--Unauthorized Personnel Keep Out," must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach

Inspection Procedures - Section 265.14

- Do non-exempt facilities have a 24-hr surveillance system equivalent to either guards or television monitoring around the active portion of the site or have a barrier around the active portion of the site and a means to control entry such as locked or monitored gates?
- Are all monitoring equipment or locks functional and used properly?
- Are signs with the warning "Danger - Unauthorized Personnel Keep Out" be posted at each entrance and at other locations in order to be seen from any approach?

The inspector should note that security may be around the entire complex of units or around individual units.

Regulatory Requirement Synopsis - General Inspection Requirements

---

§265.15 General Inspection Requirements (January 31, 1985)

(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may lead to any release of hazards.

(b) (1) The owner or operator must develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment.

(2) He must keep this schedule at the facility.

(3) The schedule must identify the types of problems which are to be looked for during the inspection.

(4) The frequency of inspection may vary for the items on the schedule. Areas subject to spills, such as loading and unloading areas, must be inspected daily.

(c) The owner or operator must remedy any deterioration which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner or operator must record inspections in an inspection log. These records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs. These records must be kept for at least three years.

Inspection Procedures - Section 265.15

- Review the facility's inspection schedule. The schedule and list of items to be checked should be included in the facility's log book.
- The items being inspected by the facility should include monitoring equipment, safety equipment, emergency response equipment, security devices, operational and structural equipment.
- The schedule should specifically list the components being inspected and define the problems that might occur, e.g. deterioration of a liner, loss of pressure in a self-contained breathing apparatus.
- The frequency of inspection may vary, but areas subject to spills such as loading and unloading areas must be inspected daily.
- The facility's inspections must be recorded in a log book or other summary. Each inspection should be dated, the inspector's full name recorded, all observations noted, and the date and nature of any repairs must be recorded.

The inspector should review all the entries in order to note if the inspections are being conducted according to the specified frequency. The inspector should also note the number of times that a facility inspector has observed problems. Facilities with logbooks without any visual observations recorded should be suspect as to whether the inspections are being done adequately or at all. Look at the most recent observation logs and see if your observations of the area or unit agree with the log. Another important entry to check is that the facility has appropriately made repairs and recorded the nature and date of those repairs in the log. The inspection records must be kept for three years.

Regulatory Requirement Synopsis - Personnel Training

---

§265.16 Personnel Training (January 31, 1985)

(a) (1) Facility personnel must successfully complete a program of training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements.

(2) This program must be directed by a person trained in hazardous waste management procedures and must include instruction relevant to the positions in which they are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies.

(b) Facility personnel must successfully complete the program within six months after the effective date of their employment or assignment to a facility, or to a new position at a facility.

(c) Facility personnel must take part in an annual review of the initial training.

(d) The owner or operator must maintain the following documents at the facility:

(1) The job title for each position related to hazardous waste management, and the name of the employee;

(2) A written job description for each position listed;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person; and

(4) Records documenting that the training or job experience requirements have been met.

(e) Training records on current personnel must be kept until closure of of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility.

Inspection Procedures - Section 265.16

- Has the documentation of a facility's personnel training program been reviewed?
- Personnel training records may be included in the right-to-know records.
- The owner/operator must identify the people that need training before a training program can be provided. Ask how the people given training were identified and assess if this is thorough.
- Has everyone mentioned in the contingency plan been trained?
- Has a job title been given for each position? Be sure that an employee's name is listed, and that a job description is provided.
- Is a description of the training to be provided and the training actually received by the employee also be included?
- Is training reviewed annually with the employees?

The owner/operators must document that training has been provided. Common forms of documentation include training session sign-up sheets or other means where each employee signs and dates a record once the training or annual update has been given. Documentation of training may not be possible where workers do not have hazardous waste handler job classification due to union rules.

The training program must enable facility personnel to respond effectively to emergencies. If possible, the inspector should ask to speak to a few employees to determine if they are familiar with what to do in the case of a spill or similar emergency in order to verify that the employee training has been provided. The determination whether a training program is adequate is often a professional judgement, but the inspector can refer to appropriate guidance in this matter.

Regulatory Requirement Synopsis - Ignitable, Reactive or Incompatible Wastes

---

§265.17 General Requirements for Ignitable, Reactive, or Incompatible Wastes
(May 19, 1980)

(a) This waste must be separated and protected from sources of ignition or reaction including but not limited to: Open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition, and radiant heat. While ignitable waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations.

(b) The mixture of incompatible or reactive wastes, must be conducted so that it does not:

(1) Generate extreme heat or pressure, fire or explosion, or violent reaction;

(2) Produce uncontrolled toxic mists, fumes, dusts, or gases;

(3) Damage the structural integrity of the device or facility containing the waste.

Inspection Procedures - Section 265.17

- Does a facility handle ignitable or reactive wastes, or wastes that might be incompatible when mixed? Determine this by reviewing the waste manifests or the waste analyses that are part of the operating record.
- Are "no smoking" signs placed conspicuously at facilities that handle ignitable wastes, and is the smoking ban is enforced?
- Do any containers or tanks contain ignitable, reactive, or incompatible wastes? Is there any evidence of bulging or off-gassing?

Specific requirements for handling these wastes are given under the unit specific subparts (I through R) of this section. Refer to the Reference section of this manual for additional material on waste compatibility.

Regulatory Requirement Synopsis - Subpart C - Preparedness and Prevention

---

§265.31 Maintenance and operation of the facility (May 19, 1980)

Facilities must be maintained and operated to minimize the possibility of any unplanned, sudden or non-sudden, release of hazardous waste or constituents to air, soil, or surface water.

§265.32 Required Equipment (May 19, 1980)

All facilities must be equipped with the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment, specified below:

(a) An internal communications or alarm system;

(b) A device, such as a telephone, capable of summoning emergency assistance from local emergency response teams;

(c) Portable fire extinguishers, fire control equipment, spill control and decontamination equipment;

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment.

§265.33 Testing and maintenance of equipment (May 19, 1980)

All safety equipment must be tested and maintained.

§265.34 Access to communications or alarm systems (May 19, 1980)

(a) Whenever hazardous waste is being handled, all personnel involved must have immediate access to an internal alarm or emergency communication device.

Inspection Procedures Subpart C - Preparedness and Prevention §265.31-§265.34

- What is the general appearance and housekeeping of the facility? Are any potential problems apparent during the visual inspection phase?

- Are any inoperative devices and deteriorated, patched, or jury-rigged equipment apparent?

The inspector should ask to see the type of internal and external communication systems in use at the facility. The inspector should look for fire extinguishers and other equipment such as hoses, sprinklers, or foam. The equipment should be maintained and in good condition. The inspector should personally check to see if simple equipment such as eye wash stations actually function.

Regulatory Requirement Synopsis - Subpart C - Preparedness and Prevention

---

§265.35 Required aisle space (May 19, 1980)

The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, and spill control equipment to any area of facility.

§265.37 Arrangements with local authorities (May 19, 1980)

(a) The owner operator must attempt to make

  (1) Arrangements to familiarize emergency response teams with the layout of the facility, properties of the hazardous waste handled at the facility, and associated hazards;

  (2) Agreements as designating primary emergency authority and agreements to provide support;

  (3) Agreements with State emergency response teams; and

  (4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and associated hazards.

(b) The owner or operator must document the refusal in the operating record.

Inspection Procedures Subpart C - Preparedness and Prevention §256.35,§265.37

- Have all local authorities been made aware of potential dangers at the site? Ask to see the agreements made by all appropriate local emergency response teams.

The owner/operator should provide proof that all local authorities were contacted, such as a certified or registered letter, and that they either agreed to a plan or have declined to participate in writing.

The inspector should also verify that aisle space is adequate and unobstructed. A good rule-of-thumb is to note if the aisle space is adequate for the removal of one drum, or at least two feet wide. Every individual drum must be able to be inspected and in some cases emergency equipment must have room to pass through the aisle space.

Regulatory Requirement Synopsis - Subpart D - Contingency Plan and Emergency Procedures

---

§265.51 Purpose and implementation of contingency plan (January 31, 1985)

(a) Each owner/operator must have a contingency plan for his facility which is designed to minimize hazards to human health or the environment from fires, explosions or any unplanned releases of hazardous waste or waste constituents.

(b) The provisions of the plan must be carried out whenever there is a situation which could threaten human health or the environment.

§265.52 Content of Contingency Plan (January 31, 1985)

(a) The contingency plan must describe the actions facility personnel must take to any unplanned sudden or non-sudden release.

(b) If the owner operator has already prepared a Spill Prevention, Control, and Countermeasures Plan, he need only amend that plan to incorporate hazardous waste management provisions.

(c) The plan must describe arrangements agreed to by local emergency response teams.

(d) The plan must list names, addresses, and phone numbers of all persons qualified to act as emergency coordinator and this list must be kept up to date.

(e) The plan must include a list of all emergency equipment. In addition, the plan must include the location and a physical description of each item on the list, and brief outline of its capabilities.

(f) The plan must include an evacuation plan for facility personnel.

§265.53 Copies of Contingency Plan (January 31, 1985)

A copy of the contingency plan must be:

(a) Maintained at the facility; and
(b) Submitted to all local emergency response teams.

Inspection Procedures - Subpart D

- Is the copy of the Contingency Plan on file at the facility detailed enough to deal with site-specific incidents?
- Does the plan must specify the name(s) of an emergency coordinator, his address, and office and home phone number? Is at least one backup or alternate emergency coordinator must be identified to ensure that one person is available at all times?
- Does the plan include a list of all emergency equipment, as well as the location and general description of the capabilities of each item listed?
- Has a copy of the Contingency Plan been kept on file at the facility and another sent to local emergency response teams (police, fire departments)? Ask to see signed receipts of these plans from the appropriate agencies. Certified or registered mail receipts are acceptable.

The plan is required to be updated when personnel or equipment change, but this may be easily overlooked. The inspector should verify that the individuals listed are current and that all the equipment listed can be located by the descriptions given. The inspector should ask to see selected equipment from the list to personally verify that the simple to operate safety equipment, such as showers or eye washes, work.

Regulatory Requirement Synopsis - Subpart D - Contingency Plan and Emergency Procedures

---

§265.54 Amendment of Contingency Plan (January 31, 1985)

The contingency plan must be reviewed, and immediately amended whenever:

(a) Regulations are revised;
(b) The plan fails in an emergency;
(c) The facility changes;
(d) The list of emergency coordinators changes; or
(e) The list of emergency equipment changes.

§265.55 Emergency Coordinator (January 31, 1985)

At all times, there must be at least one employee at the facility or on call with the responsibility for coordinating all emergency response measures.

§265.56 Emergency Procedures (January 31, 1985)

(a) When there is an emergency situation, the emergency coordinator must:

(1) Activate internal facility alarms; and

(2) Notify appropriate State or local agencies.

(b) The emergency coordinator must immediately identify the character, exact source, and amount of any released materials.

(c) The emergency coordinator must assess possible hazards to human health or the environment that my result from the release.

(d) If facility has had a release, the emergency coordinator must report his findings pursuant to subsections (1) and (2).

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or any other material that results from a release.

(j) The time, date, and details of any incident that requires implementing the contingency plan must be recorded in the operating record. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator.

Inspection Procedures - Subpart D

- o Are the emergency coordinator and backup trained to carry out the provisions of the contingency plan?

During the file review, the inspector should look for reports of incidents requiring the implementation of the contingency plan particularly if the plan should have been implemented but was not. A facility must file a report with the Regional Administrator within fifteen days of any incident. During the inspection of facilities reporting such an incident, the inspector should view the area in order to check that any spilled or released material has been contained and disposed of properly, and that any equipment which was used has been decontaminated and is fit for reuse.

Regulatory Requirement Synopsis - Subpart E - Manifest System - Discrepancies

---

§265.71 Use of the Manifest System (May 19, 1980)

(a) If a facility receives hazardous waste accompanied by a manifest, the owner/operator must:

(1) Sign and date each copy

(2) Note any significant discrepancies

(3) Give the transporter at least one copy

(4) Within 30 days send a signed copy to the generator

(5) Retain a copy at the facility

§265.72 Manifest Discrepancies (January 31, 1985)

(a) Manifest discrepancies are differences between quantity or type of hazardous waste designated on the manifest and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies are: (1) For bulk waste, variations greater than 10 percent in weight, and (2) for batch waste, any variation in piece count,

(b) Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy is not resolved within 15 days, the owner or operator must immediately submit to the Regional Administrator a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart E - Sections 265.71 and 265.72

- o Have facilities accepting offsite waste retained signed and dated copies of manifests for the wastes it accepts for three years?
- o Has the facility, within 30 days of the receipt of the waste, returned a signed and dated copy of the manifest to the generator? Observe the dates on generator return copies to see if they are being held for longer than 30 days.
- o Are there any discrepancies in files which must be recorded on the manifest document?
- o Are any changes, cross-outs or write-overs present in the manifests? If so, they should be closely reviewed.

Significant discrepancies in quantity are a variation of 10% for bulk waste and one piece, e.g. drum, for any batch waste. Incorrectly or inadequately identified waste is also a significant discrepancy. For any discrepancies noted on any manifest, the facility must have attempted to reconcile the discrepancy with the transporter(s) and generator within 15 days. Ask for verification of these attempts such as letters or notes from a phone conversation. If the discrepancy is not resolved, the owner/operator must describe the discrepancy and the attempts in a letter sent to the Regional Administrator along with a copy of the manifest. The inspector should look for copies of any letters sent and verify that the 15 day limit was met.

Regulatory Requirement Synopsis - Subpart E - Operating Record

---

§265.73 Operating Record (April 30, 1985)

(a) A written operating record must be kept at each facility.

(b) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

(1) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal;

(2) The location of each hazardous waste within the facility and the quantity at each location. Include cross-references to specific manifest document numbers, for waste accompanied by a manifest;

(3) Records and results of waste analyses and trial tests;

(4) Summary reports and details of all incidents that require implementing the contingency plan.

(5) Records and results of inspections;

(6) Monitoring, testing, or analytical data where required; and

(7) All closure cost estimates and post-closure cost estimates.

(8) Notices and certification for land disposal ban

§265.74 Availability, retention, and disposition of records (January 31, 1985)

(a) All records must be furnished upon request, for inspection,

(c) A copy of records of waste disposal locations and quantities must be submitted upon closure of the facility.

Inspection Procedures - Subpart E - Sections 265.73 and 265.74

- Has the operating record been reviewed carefully? The review of the operating record is very important to the inspection of any TSDF.
- Does a facility's operating record contain all the required information?
- Have all records and results of onsite inspections been kept as part of the operating record for three years?

The inspector should note that facilities often do not have all the items listed in 265.73(b)(1-8) in one file or designated area. However, if the information is on-site, the requirement is being met. Inspectors should encourage owners/operators to compile these items into one central area under the control of one designated individual for the operating record.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart E - Additional Reports

---

§265.75 Biennial Report (January 31, 1985)

The owner operator must submit a copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. Include the following information:

(a) The EPA identification number, name, and address of the facility;

(b) The calendar year covered by the report;

(c) For off-site facilities, the EPA identification number of each hazardous waste generator;

(d) A description and the quantity of each hazardous waste received during the year;

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) Monitoring data where required;

(g) The most recent closure cost estimate and the most recent post-closure cost estimate;

(h) The certification signed by the owner or operator of the facility; and

(i) Description of waste minimization efforts.

§265.76 Unmanifested Waste Report (January 31, 1985)

If a facility accepts any hazardous waste from an off-site source without an accompanying manifest and if the waste is not excluded from the manifest requirement, then the owner or operator must prepare and submit a single copy of a report to the Regional Administrator within fifteen days after receiving the waste. Such report must be designated "Unmanifested Waste Report" and include the following:

(a) The EPA identification number, name, and address of the facility;

(b) The date the facility received the waste;

(c) The EPA identification number, name, and address of the generator and the transporter, if available;

(d) A description and the quantity of each unmanifested hazardous waste;

Regulatory Requirement Synopsis - Subpart E - Additional Reports

---

§265.76 Unmanifested Waste Report (continued)

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) The certification signed by the owner or operator of the facility; and

(g) A brief explanation of why the waste was unmanifested.

§265.77 Additional Reports (January 28, 1983)

The owner or operator must also report to the Regional Administrator;

(a) Releases, fires, and explosions.

(b) Ground-water contamination and monitoring data.

(c) Facility closure.

Inspection Procedures - Subpart E - Sections 265.75 through 265.77

- Ask to see the facility's Biennial Report and if it is available, review the report for completeness (if it was not reviewed prior to the inspection).

- Review the unmanifested waste reports from facilities that accept waste from off-site generators. The documents should be reviewed for completeness.

- Be aware that conditionally exempt small quantity generator wastes are excluded from the manifest requirement. See 265.76 (g); comment explains what an o/o should do when receiving hazardous wastes from conditionally exempt SQGs.

Regulatory Requirement Synopsis - Subpart F - Groundwater Monitoring

---

§265.90 Applicability (January 31, 1985)

The owner or operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste must implement a ground-water monitoring program capable of determining the facility's impact on the quality of ground water in the uppermost aquifer.

§265.91 Ground-water Monitoring System (January 31, 1985)

(a) A ground-water monitoring system must consist of:

  (1) Monitoring wells (at least one) installed hydraulically upgradient.

  (2) Monitoring wells (at least three) installed hydraulically downgradient at the limit of the waste management area.

(c) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole.

§265.92 Sampling and analysis (January 31, 1985)

(a) The owner or operator must develop and follow a ground-water sampling and analysis plan. The plan must include procedures and techniques for:

  (1) Sample collection;

  (2) Sample preservation and shipment;

  (3) Analytical procedures; and

  (4) Chain of custody control.

(1) Parameters characterizing the suitability of the ground water as a drinking water supply.

(2) Parameters establishing groundwater quality.

(3) Parameters used as indicators of groundwater contamination:

Regulatory Requirement Synopsis - Subpart F - Groundwater Monitoring

---

§265.93 Preparation, evaluation, and response (January 31, 1985)

(a) The owner or operator (o/o) must prepare an outline of a ground-water quality assessment program that is capable in determining:

(1) Whether hazardous waste has entered the ground-water.

(2) The rate and extent of migration,

(3) The concentrations of hazardous constituents.

(c) (1) If the comparisons for the upgradient wells show a significant increase (or pH decrease), the o/o must submit this information.

(2) If comparisons of downgradient wells show a significant increase (or pH decrease), the o/o must then immediately obtain additional groundwater samples from downgradient wells where a significant difference was detected, to determine if the significant difference was laboratory error.

(d) (1) If the analyses performed confirm the significant increase (or pH decrease), the owner or operator must provide written notice to the Regional Administrator--within seven days of the date of such confirmation.

(2) Within 15 days after the notification the o/o must submit a specific plan for a ground water quality assessment program at the facility.

§265.94 Record Keeping and Reporting (January 31, 1985)

(a) The owner or operator must;

(1) Keep records of required analyses, associated ground-water elevations and the evaluations required throughout the active life of the facility, and for disposal facilities, throughout the post-closure care period as well;

(2) Report the following ground-water monitoring information;

(i) During the first year concentrations of the parameters listed in §265.92(b)(1);

(ii) Annually: Concentrations of the parameters listed in 265.92(b)(3);

(iii) No later than March 1 following each calendar year; Results of the evaluations of ground-water surface elevations.

Inspection Procedures - Subpart F - Sections 265.90 through 265.94

- The Subpart F CEI inspection is not to be confused with the CME or O&M inspections which go beyond the scope of the CEI in evaluating ground water monitoring.

Since Subpart F - Ground Water Monitoring, is very important when determining a facility's compliance with RCRA, the inspector should review and refer to the RCRA Ground-water Monitoring Technical Enforcement Guidance Document (TEGD) in order to evaluate a facility's ground water monitoring system. Also refer to the RCRA Laboratory Audit Inspection Guidance manual if possible. This manual addresses the identification of error in monitoring well data that may be valuable to the inspector.

Regulatory Requirement Synopsis - Subpart G - Closure and Post-closure

---

§265. 112 Closure Plan (May 19, 1980)

(a) Written plan. By May 19, 1981, the owner or operator of a hazardous waste management facility must have a written closure plan.

(b) Content of plan. The plan must identify steps necessary to perform partial and/or final closure of the facility.

(c) The owner or operator may amend the closure plan at any time prior to the notification of partial or final closure of the facility.

(d) The owner or operator must submit the closure plan to the Regional Administrator at least 180 days prior to the date on which he expects to begin closure of the first surface impoundment, waste pile, land treatment, or landfill unit, or final closure if it involves such a unit.

Owners and operators with approved closure plans must notify the Regional Administrator at least 45 days prior to the date on which he expects to begin final closure of a facility with only tanks, container storage, or incinerator units.

Inspection Procedures - Subpart G - Sections 265.112

- Is the closure plan been updated and current?

Note that only facilities with approved closure plans are required to submit a request to EPA in order to change their closure plans.

In many cases at interim status facilities, the inspector is the only official that has an opportunity to evaluate the completeness of the plan prior to closure and submittal of the plan to the Administrator. The inspector should closely evaluate the content of the plan to verify that it adequately addresses the required steps and that all units are covered by the plan.

The owner/operator must "expect to begin" closure within 30 days after receiving the last shipment of waste, and notification and submittal of the closure plan to EPA must occur by the specified time period depending upon the nature of the unit. If the inspector feels that a unit does not have the capacity to manage additional wastes, he should question the owner/operator about the anticipated date when operations cease and the submittal of the closure plan in the required time period.

Regulatory Requirement Synopsis - Subpart G - Closure and Post-closure

---

§265.113 Closure

(a) Within 90 days after receiving the final volume of hazardous wastes, or within 90 days after approval of the closure plan, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan.

(b) Within 180 days after receiving the final volume of hazardous wastes, the owner or operator must complete final closure.

§265.114 Disposal or decontamination

All contaminated equipment, structures and soil must be properly disposed of, or decontaminated.

§265.115 Certification

Within 60 days of completion of closure the owner or operator must submit to the Regional Administrator, a certification that the hazardous waste management unit or facility, has been closed in accordance with the specifications in the approved closure plan.

§265.116 Survey plat

An owner or operator must submit to the local authority, with jurisdiction over local land use, and to the Regional Administrator, a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart G - Sections 265.113 through 265.116

- Have any activities or sections been shut down? If so, have the appropriate partial closure steps been taken? Be aware that the owner/operator may close certain units but not the whole facility.
- Has closure or partial closure been completed within 180 days after receipt of the last shipment of waste? If not, has the Administrator approved an extension?
- Has closure been completed properly and all wastes or materials been properly disposed or decontaminated? Closed unit(s) should be visually inspected.

Regulatory Requirement Synopsis - Subpart G - Closure and Post-closure

---

§265.117 Post-closure care (May 19, 1980)

(a)(1) Post-closure care for each hazardous waste management unit subject to the requirements must begin after completion of closure of the unit and continue for 30 years after that date.

§265.118 Post-closure plan (May 19, 1980)

(a) By May 19, 1981, the owner or operator of a hazardous waste disposal unit must have a written post-closure plan.

§265.119 Post-closure notices (May 19, 1980)

(a) No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local authority with jurisdiction over local land use, and to the Regional Administrator, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of facility.

(b) Within 60 days of certification of closure:

  (1) Record, in accordance with the State law, a notation on the deed to the facility property:

    (i) The land has been used to manage hazardous wastes; and

    (ii) Its use is restricted under 40 CFR Subpart G regulations.

§265.120 Certification of completion of post-closure (May 19, 1980)

No later than 60 days after the completion of the established post-closure care period for each hazardous waste disposal unit the owner or operator must submit to the Regional Administrator a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan.

Inspection Procedures - Subpart G - Sections 265.117 through 265.120

- Does the facility have a post closure plan? Note that only land disposal facilities are required to have post-closure plans.

- Is the post-closure plan is current? Only facilities with approved post-closure plans need submit a request to EPA in order to update their post-closure plans.

In many cases at interim status facilities, the inspector is the only official that has an opportunity to evaluate the completeness of the plan prior to closure and submittal of the plan to the Administrator. The inspector should closely evaluate the content of the plan to verify that it adequately addresses the maintenance and monitoring requirements.

The owner/operator must submit the post-closure plan in the same time frame as the closure plan for land disposal units. Certain units may be under post-closure care while the facility is still operating other units. The inspector should ask if any units, specifically disposal units, are closed and should be under post-closure care.

Regulatory Requirement Synopsis - Subpart H - Financial Requirements

---

§265.142 Cost estimate for closure (May 2, 1986)

(a) The owner/operator must have a detailed written estimate of the cost of closing the facility as required. The estimate must include the highest costs possible for closure under the closure plan. The costs must be based on third party closure and cannot incorporate any salvage value.

(b) The closure cost estimate must be adjusted for inflation.

(c) The closure cost estimate must be revised within 30 days of a revision to the plan.

(d) The closure cost estimate must be kept at the facility during the operating life. Revisions must be deleted.

§265.143 Financial assurance for closure (May 2, 1986)

The owner/operator must establish financial assurance for closure of the facility by choosing are of these options;

(a) Closure trust fund

(b) Surety bond guaranteeing payment into a closure trust fund

(c) Closure letter of credit

(d) Closure insurance

(e) Financial Test and corporate guarantee for closure

(f) Use of multiple financial mechanisms

Within 60 days after certification of final closure, the RA will notify the owner/operator that he is no longer required to maintain financial assurance.

Inspection Procedures - Subpart H - Sections 265.142 and 265.143

- Does the facility have the required copy of the cost estimate onsite?
- Which financial mechanism has the owner/operator elected to use?

The inspector should verify that the cost estimate includes third-party closure costs and is updated within 30 days of any significant revisions to the closure plans or when the closure plan is submitted to EPA. Documentation of financial assurance is not required to be kept at the facility and may be kept at a central or corporate location.

Regulatory Requirement Synopsis - Subpart H - Financial Requirements

---

§265.144 Cost estimate for post-closure care (May 2, 1986)

(a) The owner/operator must have a detailed written estimate of the cost of post-closure care for the facility as required. The estimate must be based upon third party costs and is determined by multiplying the annual post-closure cost by the number of years of care.

(b) The post-closure care cost estimate must be adjusted for inflation.

(c) The post-closure care cost estimate must be revised written 30 days of a revision to the post-closure care plan.

(d) The closure cost estimate must be kept at the facility during operating life and revision must be dated.

§265.145 Financial assurance for post-closure care (May 2, 1986)

The owner/operator must establish financial assurance for closure of the facility by choosing one of these options

(a) Post-closure trust fund

(b) Surety bond guarantee payment into a post-closure trust fund

(c) Post-closure letter of credit

(d) Post-closure insurance

(e) Financial test and corporate guarantee for post-closure care

(f) Use of multiple financial mechanisms

Inspection Procedures - Subpart H - Sections 265.144 and 265.145

- Does the facility have the required copy of the cost estimate for post-closure care on-site?
- Has a copy of the cost estimate for post-closure care and the documentation of financial assurance for the post-closure care period been reviewed?

The inspector should verify that the cost estimate includes third-party closure costs and is updated within 30 days of any significant revisions to the post-closure care plans or when the post-closure care plan is submitted to EPA. Documentation of financial assurance for post-closure care is not required to be kept at the facility and may be kept at a central or corporate location. The inspector should ask which financial mechanism the owner/operator has elected to use.

Regulatory Requirement Synopsis - Subpart H - Financial Requirements

---

§265.147 Liability requirements (May 2, 1986)

(a) Coverage for sudden accidental occurrences must be maintained by the owner/ operator as of November, 1985. Liability insurance may be demonstrated in one of three ways;

(1) Hazardous Waste facility liability endorsement or by a Certificate of Liability Insurance.

(2) Passing a financial test for liability

(3) A combination of the above

(b) Coverage for non-sudden accidental occurrences must be maintained for land disposal units. The required liability insurance can be demonstrated in one of three ways:

(1) Hazardous Waste Facility Liability Endorsement or by a Certificate of Liability Insurance.

(2) Passing a financial test for liability

(3) A combination of the above.

(c) The owner/operator can request a variance and the RA may adjust the required level of financial responsibility.

Inspection Procedures - Subpart H - Sections 265.147

- If a facility has lost its liability coverage, has the owner/operator submitted the closure plan and stopped accepting wastes?

The inspector should note that proof of liability coverage does not have to be onsite.

The owner/operator was required to submit documentation of liability insurance to the Regional Administrator by November 8, 1985, or meet the financial test requirements, obtain a waiver, or have a State guarantee. Unless the facility has met one of there requirements, it has lost interim status and must close. While many facilities lost interim status after that date, many have not submitted closure plans. During the pre-inspection review, documentation of liability insurance or a demonstration of meeting the financial test should be verified. At facilities that have lost interim status, the inspector should verify that the facility is no longer accepting wastes, and that the closure plan, post-closure care plan (when applicable) and cost estimates have been submitted. At facilities where EPA has approved the plans, the inspector should verify that closure and post-closure activities are being appropriately carried out.

Regulatory Requirement Synopsis - Subpart I - Containers

---

§265.171 Condition of Containers (May 19, 1980)

If a container holding hazardous waste is not in good condition, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition.

§265.172 Compatibility of waste with container (May 19, 1980)

The owner or operator must use a container made of, or lined with materials which will not react with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

§265.173 Management of containers (November 25, 1980)

(a) A container holding hazardous waste must always be closed during storage,

(b) A container holding hazardous waste must not be opened, handled, or stored so that the container may rupture or leak.

§265.174 Inspections (May 19, 1980)

The owner or operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

§265.176 Ignitable or reactive wastes (May 19, 1980)

Containers holding ignitable or reactive waste must be located at least 15 meters from the facility's property line.

§265.177 Special requirements for incompatible wastes (May 19, 1980)

(a) Incompatible wastes, must not be placed in the same container.

(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste.

(c) A storage container holding a hazardous waste that is incompatible must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

Inspection Procedures - Subpart I

During an inspection of a container storage area, the inspector should check the following areas:

- The security around the unit.
- The condition of the containers (leaks, deterioration or signs of incompatibility such as swollen drums, corrosion or off-gassing).
- Whether there is sufficient aisle space.
- Dead vegetation or stains in the storage run-off area.
- Safety and emergency equipment.
- Does evidence of past spills correlate with the operating record?
- Are there any drums that are not stored in unauthorized area which are apparent during a thorough walk through?

If the containers are storing ignitable or reactive waste and are located within 15 meters of the property boundary but inside a structure, the owner/operator should have a waiver from the local fire marshall. Even with a waiver, the acceptability of this practice must be evaluated on a case-by-case basis. Containers must be handled safely. Check with the owner/operator on how they handle the containers, i.e. by hand or fork truck.

The inspector should be aware that some States require secondary containment of the storage area for generators accumulating wastes for less than 90 days. See Section 264, Subpart I.

Regulatory Requirement Synopsis - Subpart J - Tanks

---

§265.190 Applicability (July 14, 1986)

These regulations apply to all tank systems used to store or treat hazardous waste except:

(a) Tanks used for wastes without free liquids that are in a building with an impermeable floor.

(b) Tanks, including sumps, that are part of a secondary containment system.

The above tanks are exempted only from 265.193, secondary containment requirements.

§265.191 Assessment of existing tank system's integrity (July 14, 1986)

(a) Existing tank systems without secondary containment (§265.193) must have a written assessment certified by an independent, qualified registered professional engineer (IQPRE) attesting to its integrity by January 12, 1988.

(b) The assessment must consider the following;

- (1) Design standards.
- (2) Characteristics of the waste.
- (3) Existing corrosion protection.
- (4) Documented age of system.
- (5) Results of leak test, internal inspection or other integrity exam.

(d) If the tank system is unfit for use, it must be taken out of service and repaired or retrofitted appropriately before reuse, or replaced, in compliance with 265.196.

§265.192 Design and installation of new tank systems or components (July 14, 1986)

(a) New tank systems or components must be certified by an IQPRE for structural integrity and compliance with design standards. All components in contact with soil or water must be evaluated by a corrosion expert.

(b) During the installation of a new tank system or component and prior to its use, an IQPRE must inspect the system.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart J - Tanks

---

§265.192 Design and installation of new tank systems or components (continued)

(c) All back fill material must be non-corrosive, porous, and homogenous.

(d) All tanks and ancillary equipment must be tested for tightness.

(e) Ancillary equipment must be protected.

(f) The owner/operator must provide necessary corrosion protection.

(g) Written statements and certification for design, and installation must be kept on file.

§265.193 Containment and detection of releases (July 14, 1986)

(a) Secondary containment must be provided as follows;

  (1) All new tank systems or components prior to use.

  (2) All existing tank systems handling dioxin wastes by January 12, 1989.

  (3) Existing tank systems of known age by January 12, 1989 or by 15 years of age, whichever comes later.

  (4) For existing tank systems without documented age not later than January 12, 1995, or, if the facility is greater than seven years old, by the time the facility is 15 years old, or by January 12, 1989, whichever is later.

  (5) Secondary containment systems must:

    (1) Prevent migration of any wastes or accumulated liquids.

    (2) Be capable of detecting and collecting any releases.

(c) The containment systems must be compatible with the wastes or liners, prevent failure, provide leak detection and be designed to remove any liquid.

(f) Ancillary equipment (such as pipes, sumps) must be provided with full secondary containment.

(i) All tank systems must conduct a leak test at least annually until such time as secondary containment meeting the requirements of this section is provided. The results of such tests must be retained on file at the facility.

Regulatory Requirement Synopsis - Subpart J - Tanks

---

§265.194 General Operating Requirements (July 14, 1986)

(a) Hazardous wastes may not be placed in a tank system if they can cause it to fail.

(b) Spills and overflows must be prevented.

§265.195 Inspections (July 14, 1986)

(a) The owner/operator must inspect the following daily;

(1) Overfill and spill control equipment;

(2) Above ground positions of tank system;

(3) Data from monitoring and leak detection systems; and

(4) Area surrounding externally accessible portion of tank system.

(b) Cathodic protection systems must be inspected within 6 months after installation and annually afterwards. Impressed current sources must be tested bimonthly.

(c) The inspections must be documented in the operating record.

§265.196 Response to leaks and disposition of unfit tank systems
(July 14, 1986)

If there has been a leak or spill, or if the tank system is unfit for use, the following must be done:

(a) Stop adding wastes;

(b) Remove waste from tank system;

(c) Contain visible releases;

(d) Report to RA as appropriate;

(e) Provide secondary containment or close; and

(f) Certify major repairs.

Regulatory Requirement Synopsis - Subpart J - Tanks

---

§265.197 Closure and post-closure care (July 14, 1986)

(a) At closure, the O/O must remove or decontaminate all material; or

(b) He can close as a landfill.

(c) For tanks without secondary containment, closure plans and financial assurance must be prepared for both closure options.

§265.198 Special requirements for ignitable or reactive wastes (July 14, 1986)

(a) Ignitable or reactive waste must not be placed in a tank unless:

  (1) The waste has been treated so that it is no longer ignitable or reactive; or

  (2) The tank is protected from conditions that may cause the waste to ignite or react; or

  (3) The tank is used only for emergencies; and

(b) The O/O maintains a protective distance between the waste and any public ways or adjoining properties.

§265.199 Special requirements for incompatible wastes (July 14, 1986)

(a) Incompatible wastes must not be placed in the same tank system.

(b) Tanks must be decontaminated prior to holding incompatible wastes.

§265.200 Waste analysis and trial tests (July 14, 1986)

The owner or operator must, whenever a tank system is to be used to treat or to store a hazardous waste that is substantially different from the waste previously handled in that tank system; or treat the old waste with a different process.

(a) Conduct waste analyses and trial treatment or storage tests.

(b) Obtain written documented information on similar waste under similar operating conditions.

Regulatory Requirement Synopsis - Subpart J - Tanks

---

§265.201 Special requirements for SQGs that accumulate waste in tanks
(July 14, 1986)

(a) The following requirements apply to small quality generators (between 100 kg and 1,000 kg per month) that accumulate hazardous waste in tanks for less than 180 days (or 270 days if the waste is shipped over 200 miles), and do not accumulate over 6,000 kg on-site at any time.

(b) Generators must comply with the following general operating requirements:

 (2) Hazardous wastes must not be placed in a tank if they could cause it to fail before the end of its intended life.

 (3) Uncovered tanks must have at least 60 centimeters of freeboard.

 (4) On tanks with a continuous feed, the tank must be equipped with a means to stop this inflow.

(c) Generators must inspect:

 (1) Discharge control equipment at least once each operating day;

 (2) Data from monitoring equipment at least once each operating day;

 (3) The level of waste in the tank at least once each operating day;

 (4) The construction materials of the tank at least weekly; and

 (5) The construction materials of and the area at least weekly.

(d) Upon closure of the facility, SQGs must remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

(e) Generators must comply with requirements for ignitable or reactive waste.

(f) Generators must comply with above requirements for incompatible wastes

---

Inspection Procedures - Subpart J

- Is a written assessment on tank integrity provided for existing tanks by January 12, 1988?
- Are new tanks are adequately designed and properly installed with appropriate documentation?
- Is secondary containment provided when required?
- Are inspection and record keeping requirements being met?
- Are spill and overfill prevention measures adequate and operational?
- Are annual assessments being completed?

The inspector should remember that the regulations which are applicable to above-, on-, in-, and underground tanks that can be entered apply in States without authorized RCRA programs only, unless a State amends its statute. Requirements for the permitting of unenterable, underground tank systems, new underground tank systems, and SQGs apply in all States. Detailed inspection procedures are provided in the "Inspection Manual for Hazardous Waste Storage and Treatment Tank Systems".

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart K - Surface Impoundments

---

§265.221 Design requirements (July 15, 1985)

(a) The owner/operator of a surface impoundment must install two or more liners and a leachate collection system for each new unit, replacement unit, or lateral expansion.

(b) The owner/operator of each unit must notify the RA at least sixty days prior to receiving waste.

(c) If the owner/operator demonstrates that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems, the requirements for such may be waived.

(d) The double liner requirement may be waived for any monofill if:

  (1) The monofill contains wastes from foundry furnace emission controls or metal casting molding sand, and are not EP toxic; and

  (2) The monofill has at least one liner; and

    (B) The monofill is located more than one-quarter mile from an underground source of drinking water; and

    (C) The monofill is in compliance with ground-water requirements.

§265.222 General Operating Requirements (April 23, 1985)

(a) A surface impoundment must have enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm.

(b) A freeboard level less than 60 centimeters may be maintained if the owner/operator obtains certification by a qualified engineer.

§265.223 Containment system (May 19, 1980)

All earthen dikes must have a protective cover.

§265.225 Waste analysis and trial tests (May 19, 1980)

Additional waste analyses are required when a surface impoundment is used to:

(1) Chemically treat a hazardous waste which is different from waste treated previously

(2) Chemically treat hazardous waste with a different process.

Regulatory Requirement Synopsis - Subpart K - Surface Impoundments

---

§265.226 Inspections (May 19, 1980)

(a) The owner/operator must inspect:

(1) The freeboard level at least once each operating day, and

(2) The surface impoundment at least once a week to detect any leaks, deterioration, or failures in the impoundment.

§265.228 Closure and post-closure care (May 19, 1980)

(a) At closure, the owner/operator may elect to remove from the impoundment:

(1) Standing liquids;

(2) Waste and waste residues;

(3) The liner;

(4) Underlying and surrounding contaminated soil.

(b) If the owner/operator removes all the impoundment materials in the impoundment it is not further subject to the requirements of this part.

(c) If the owner/operator does not remove all the impoundment materials, he must close the impoundment and provide post-closure care as for a landfill. If necessary to support the final cover, the o/o must treat remaining contents by removal of liquids by drying, or other means.

§265.229 Special requirements for ignitable or reactive wastes (May 19, 1980)

Ignitable or reactive waste must not be placed in a surface impoundment unless:

(a) The waste is treated, and:

(1) The resulting waste mixture no longer meets the definition of ignitable or reactive waste; or the waste is managed so that it is protected from any conditions which may cause it to ignite or react;

(2) The owner/operator obtains a certification that the design features or operating plans of the facility will prevent ignition or reaction

§265.230 Special requirements for incompatible wastes (May 19, 1980)

(a) Incompatible wastes must not be placed in the same Surface Impoundments.

Inspection Procedures - Subpart K

- Is there adequate freeboard?
- Has any replacement or lateral expansion of a unit included the installation of two or more liners and a leachate collection system? In addition, has the Part B application been filed, or a waiver been obtained?
- Does the waste analysis plan include procedures to determine treatability or compatibility of wastes in surface impoundments?

The inspector should also remember that interim status surface impoundments that continue to operate must be retrofitted with two liners and a leachate collection system between the liners by November 8, 1988 unless it has an existing liner with no evidence of leaks and no drinking wells nearby; the impoundment is for aggressive biological treatment; or the o/o demonstrates no migration.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart L - Waste Piles

---

§265.251 Protection from wind (May 19, 1980)

The owner/operator must cover the pile or control wind dispersion.

§265.252 Waste analysis (May 19, 1980)

The owner/operator must analyze a representative sample of waste from each incoming movement unless the wastes the facility receives which are amenable to piling are comparable.

§265.253 Containment (July 26, 1982)

If leachate or run-off from a pile is a hazardous waste, then either:

(a)(1) The pile must be placed on a compatible impermeable base;

(2) The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm;

(3) The owner/operator must design, construct, operate, and maintain a run-off management system to collect the water volume resulting from a 24-hour, 25-year storm; and

(4) Collection and holding facilities must be emptied promptly;or

(b)(1) The pile must be protected from precipitation and run-on; and

(2) No liquids may be placed in the pile.

§265.254 Design requirements (July 15, 1985)

The owner/operator of a waste pile is subject to the requirements for liners and leachate collection systems with respect to each new unit, replacement of unit, or lateral expansion.

§265.256 Special requirements for ignitable or reactive wastes (May 19, 1986)

(a) Ignitable or reactive wastes must not be placed in a pile, unless:

(1) The waste or mixture no longer meets the definition of ignitable or reactive waste;

(2) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

Regulatory Requirement Synopsis - Subpart L - Waste Piles

---

§265.257 Special requirements for incompatible wastes (May 19, 1980)

(a) Incompatible wastes must not be placed in the same pile unless they do not give off heat, vapors, fumes, etc.

(b) A pile of hazardous waste that is incompatible with any waste or other material must be separated from the other materials, or protected from them by means of a dike, berm, or other device.

(c) Incompatible hazardous waste must not be piled on the same area unless that area has been decontaminated sufficiently.

§265.258 Closure and post-closure care (July 26, 1982)

(a) At closure, tne owner/operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment, and manage them as hazardous waste.

(b) If the owner/operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills.

Inspection Procedures - Subpart L

While inspecting a facility that uses waste pile(s) to manage wastes, the inspector should evaluate the following areas:

- What is the impermeability of the base and is it compatible with the waste?
- Is the run-off management system adequate?
- Are the evaluation and disposal method of contaminated runoff adequate?
- Do replacement units or lateral expansions have the required liners and a leachate collection system?
- Is the method used to control wind dispersion (usually a tarp or location inside a structure) adequate?

Regulatory Requirement Synopsis - Subpart M - Land Treatment

---

§265.272 General operating requirements (April 23, 1985)

(a) Hazardous waste must not be placed in or on a land treatment facility unless the waste can be made less hazardous or non hazardous by degradation, transformation, or immobilization processes occurring in or on the soil.

(b) The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portions of the facility during peak discharge from at least a 25-year storm.

(c) The owner/operator must design, construct, operate, and maintain a run-off management system capable of collecting and controlling a water volume at least equivalent to a 25-year storm.

(d) Collection and holding facilities must be emptied or otherwise expeditiously managed after storms.

(e) If the treatment zone contains matter subject to wind dispersal, the owner/operator must control wind dispersal.

§265.273 Waste Analysis (May 19, 1980)

Before treating a hazardous waste at a land treatment unit, the o/o must:

(a) Determine the concentrations in the waste of any substances which exceed the maximum concentrations of constituents that cause a waste to exhibit the EP toxicity characteristic;

(b) For any waste listed, determine the concentrations of any substances which caused the waste to be listed as a hazardous waste;

(c) If food chain crops are grown, determine the concentrations in the waste of arsenic, cadmium, lead, and mercury.

§265.276 Food chain crops (April 1, 1983)

(a) An o/o of a land treatment unit on which food chain crops are being grown, or have been or will be grown must notify the RA within 60 days.

(b)(1) Food chain crops must not be grown on the treated area of a land treatment facility unless the owner/operator can demonstrate, that any arsenic, lead, mercury, or other constituents identified

(i) Will not be transferred to the food portion of the crop;

(ii) Will not occur in greater concentrations in crops grown on the land treatment unit than in the same crops grown on untreated soils.

Regulatory Requirement Synopsis - Subpart M - Land Treatment

---

§265.278 Unsaturated zone monitoring (May 19, 1980)

(a) The owner/operator must have in writing, and must implement, an unsaturated zone monitoring plan which is designed to :

- (1) Detect the vertical migration of hazardous waste constituents under the active portion of the land treatment facility, and
- (2) Provide information on the back-ground concentrations of the hazardous waste constituents in untreated soils nearby;

(b) The unsaturated zone monitoring plan must include,

- (1) Soil monitoring using soil cores, and
- (2) Soil-pore water monitoring using devices such as lysimeters.

§265.279 Recordkeeping (July 26, 1982)

The operating record must include waste application dates and rates.

§265.280 Closure and post-closure care (July 26, 1982)

(a) In the closure plan and the post-closure plan, the owner/operator must address the following objectives:

- (1) Control of the migration of hazardous constituents into ground water;
- (2) Control contaminated run-off from entering surface water;
- (3) Control of the release of airborne particulate contaminants;
- (4) The growth of food-chain crops.

(b) The o/o must address the following for closure and post-closure care:

- (1) Type and amount of hazardous waste and constituents applied;
- (2) The mobility and the expected rate of migration;
- (3) Site location, topography, and surrounding land use;
- (4) Climate;
- (5) Geological and soil profiles and surface and subsurface hydrology;
- (6) Unsaturated zone monitoring;

Regulatory Requirement Synopsis - Subpart M - Land Treatment

(7) Type, concentration, and depth of migration of hazardous waste constituents in the soil as compared to background.

(c) The owner/operator must consider

(1) Removal of contaminated soils;

(2) Placement of a final cover;

(3) Monitoring of ground water.

(d) During the closure period, the o/o of a land treatment facility must;

(1) Continue unsaturated zone monitoring specified in the closure plan;

(2) Maintain the run-on control;

(3) Maintain the run-off management system; and

(4) Control wind dispersal.

(e) When closure is completed the owner/operator must submit certification from the owner/operator and by an independent qualified soil scientist.

(f) During post-closure care, the o/o of a land treatment unit must:

(1) Continue soil-core monitoring;

(2) Restrict access to the unit;

(3) Assure that growth of food chain crops complies;

(4) Control wind dispersal.

§265.281 Special requirements for ignitable or reactive wastes (July 26, 1982)

Ignitable or reactive waste must not be land treated unless:

(a) The waste is immediately incorporated into the soil so that the resulting mixture, no longer is ignitable or reactive; and

(b) The waste is managed such that it is protected from any material or conditions which may cause it to ignite or react.

§265.282 Special requirements for incompatible wastes

Incompatible wastes must not be placed in the same land treatment area unless heat, vapors or fumes are not generated.

Inspection Procedures - Subpart M

- Is the run-off management system adequate?
- Is the evaluation and disposal method of contaminated runoff adequate?
- Does the waste analysis plan include procedures to evaluate all substances for which the applied waste was listed or is EP toxic?
- What is the type of cover crop being grown, particularly on closed units? The inspector should note whether it could be, or is already being, used as a food chain crop.

While inspecting a land treatment unit, the inspector should also consider the following:

- Land treatment facilities operating under interim status may submit existing operating data as part of the Land Treatment Demonstration required under Part 264 permitting process, however, they cannot apply any new waste as part of the demonstration under interim status without obtaining a short-term or two phase permit.
- Some practices such as discharge into a septic field may qualify as land treatment.

The inspector should refer to the "Permit Guidance Manual on Hazardous Waste Land Treatment Demonstrations"

Regulatory Requirement Synopsis - Subpart N - Landfills

---

§265.301 Design requirements (July 15, 1985)

(a) The owner or operator of a landfill must install two or more liners and leachate collection systems above and between such liners each new unit replacement unit, or lateral expansion.

(b) The owner or operator of each unit must notify the Regional Administrator at least sixty days prior to receiving waste.

(c) The owner or operator may demonstrate that alternative design and operating practices together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems and the requirements may be waived.

(d) The double liner requirement may be waived for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and is not EP toxic.

(2)(i)(A) The monofill has at least one liner;

(B) The monofill is located more than one-quarter mile from a well; and

(C) The monofill complies with ground-water monitoring requirements.

§265.302 General operating requirements (April 30, 1985)

(a) The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.

(b) The o/o must design, construct operate and maintain a run-off management system to collect and control volume from a 24- hour, 25-year storm.

(c) Collection and holding facilities must be emptied expeditiously.

(d) The o/o of a landfill subject to wind must control wind dispersal.

§265.309 Surveying and record keeping (May 19, 1980)

The o/o of a landfill must maintain the following in the operating record:

(a) A map of the exact location, dimensions, and depth of each cell; and

(b) The contents of each cell and the location of each hazardous waste type within each cell.

Regulatory Requirement Synopsis - Subpart N - Landfills

---

§265.310 Closure and post-closure care (April 23, 1985)

(a) At final closure of the landfill or of any cell, the o/o must cover the landfill or cell with a final cover designed and constructed to:

  (1) Provide long-term minimization of migration of liquids through the closed landfill;

  (2) Function with minimum maintenance;

  (3) Promote drainage and minimize erosion;

  (4) Accommodate settling; and

  (5) Have a permeability less than or equal to the permeability of any bottom liner.

(b) After final closure, the owner/operator must comply with all post closure requirements:

  (1) Maintain the integrity and effectiveness of the final cover;

  (2) Maintain and monitor the ground-water monitoring system;

  (3) Prevent run-on and run-off from damaging the final cover; and

  (4) Protect and maintain surveyed benchmarks.

§265.312 Special requirements for ignitable or reactive wastes (July 26, 1982)

(a) Ignitable or reactive waste must not be placed in a landfill, unless the waste is treated so that the resulting mixture is no longer ignitable or reactive.

(b) Ignitable wastes in containers may be landfilled provided that the wastes are disposed of such a way that they are protected from any material or conditions which may cause them to ignite.

§265.313 Special requirements for incompatible wastes (May 19, 1980)

Incompatible wastes must not be placed in the same landfill cell.

Regulatory Requirement Synopsis - Subpart N - Landfills

---

§265.314 Special requirements for bulk and containerized liquids (May 28,1986)

(b) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids is prohibited.

(c) Containers holding free liquids must not be placed in a landfill unless:

- (1) All free standing liquid has been removed; or
- (2) The container is very small; or
- (3) The container is designed to hold free liquids; or
- (4) The container is a lab pack.

(d) To demonstrate the absence or free liquids, the Paint Filter Liquids Test must be used.

§265.315 Special requirements for containers (April 23, 1985)

Unless they are very small, containers must be either;

(a) At least 90 percent full; or

(b) Crushed, shredded, or similarly reduced in volume.

§265.316 Disposal of small containers of hazardous waste in overpack drums (November 17, 1981)

Small containers of hazardous waste in overpacked drums (lab pack) may be placed in a landfill if:

(a) Hazardous waste is packaged in non-leaking inside containers;

(b) The inside containers are overpacked in an open head DOT-specification metal shipping container;

(c) The absorbent material used is not capable of reacting dangerously, being decomposed by, or being ignited by, the contents;

(d) Incompatible wastes, are not be placed in the same outside container; and

(e) Reactive wastes are be treated

Inspection Procedures - Subpart N

- Is the map providing the location and cell dimensions, and the contents of each cell adequate?
- Is the evaluation and disposal method of contaminated runoff adequate?
- What is the integrity of the final cover during the post-closure period?
- Is the maintenance of the ground-water monitoring system adequate?

While inspecting a landfill, the inspector should also remember that any replacement or lateral expansion of a unit requires two or more liners and a leachate collection system plus the filing of a Part B application (or the attainment of a waiver).

Regulatory Requirement Synopsis - Subpart O - Incineration

---

§265.341 Waste analysis (May 19, 1980)

The owner or operator must analyze any waste not previously burned to enable him to establish steady state operating conditions and to determine the type of pollutants which might be emitted. The analyses must determine:

(a) The heating value of the water;

(b) The halogen content and sulfur content in the waste; and

(c) The concentrations of lead and mercury in the waste.

§265.345 General operating requirements (May 19, 1980)

During start-up and shut-down of an incinerator, the owner or operator must not feed hazardous waste unless the incinerator is at steady state conditions.

§265.347 Monitoring and inspections (June 24, 1982)

The owner or operator must conduct the following monitoring and inspections:

(a) Existing instruments which relate to combustion and emission control must be monitored at least every 15 minutes.

(b) The complete incinerator and associated equipment must be inspected at least daily.

§265.351 Closure (May 19, 1980)

At closure, the owner or operator must remove all hazardous waste and hazardous waste residues from the incinerator.

§265.352 Interim status incinerators burning particular hazardous wastes January 14, 1985)

(a) Interim status incinerators may burn dioxin bearing wastes only if they receive certification and meet performance standards.

Inspection Procedures - Subpart O

While inspecting an incinerator, the inspector should check the following areas:

- Waste types, particularly dioxin containing wastes.
- Feed rates and operating conditions.
- Ash handling and ultimate disposal.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart P - Thermal treatment

---

§265.373 General operating requirements (May 19, 1980)

Before adding hazardous waste, the owner or operator must bring his thermal treatment process to steady state conditions.

§265.375 Waste analysis (May 19, 1980)

The owner or operator must sufficiently analyze any waste which he has not previously treated to enable him to establish steady state operating conditions. The analysis must determine:

(a) The heating value of the waste;

(b) The halogen content and sulfur content in the waste; and

(c) The concentrations of lead and mercury in the waste.

§265.377 Monitoring and inspections (May 19, 1980)

The o/o must conduct the following monitoring and inspections:

(1) Existing instruments which relate to temperature and emission control must be monitored at least every 15 minutes.

(2) The stack plume must be observed visually at least hourly for normal appearance.

(3) The complete thermal treatment process and associated equipment must be inspected at least daily.

§265.381 Closure (May 19, 1980)

At closure, the owner or operator must remove all hazardous waste and hazardous waste residue from thermal treatment process or equipment.

§265.382 Open burning; waste explosives (May 19, 1980)

Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives.

§265.383 Interim status thermal treatment devices burning particular hazardous wastes (January 14, 1985)

Interim status thermal treatment devices may burn dioxin - bearing wastes only if they receive certification and meet performance standards.

Inspection Procedures - Subpart P

While inspecting a thermal treatment unit, the inspector should consider the following areas:

- o Waste types being treated.
- o Operating conditions.
- o Residue handling and ultimate disposal.

TABLE III-3 Interim Status Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart Q - Chemical, Physical and Biological Treatment

---

§265.400 Applicability (May 19, 1980)

The following regulations apply to units which treat hazardous wastes by chemical, physical or biological methods other than tanks, surface impoundments and land treatment. Treatment in tanks, surface impoundments and land treatment units are covered in Subparts J, K and M respectively.

§265.401 General operating requirements (May 19, 1980)

(a) Chemical, physical, or biological treatment of hazardous waste must not generate heat, fumes, or vapors.

(b) Hazardous wastes or treatment reagents must not be placed in the treatment process or equipment if they could cause the treatment process to fail before the end of its intended life.

(c) Where hazardous waste is continuously fed into a treatment process, the process must be equipped with a means to stop this inflow.

§265.402 Waste analysis and trial tests (May 19, 1980)

Additional analysis is required whenever:

(1) A hazardous waste is substantially different from waste previously treated; or

(2) A substantially different process is to be used. The addition analysis consists of:

(i) Conducting waste analyses and trial treatment tests.

(ii) Obtaining written, documented, information on similar treatment experience.

§265.403 Inspections (May 19, 1980)

(a) The owner or operator of a treatment facility must inspect:

(1) Discharge control and safety equipment at least once each operating day;

(2) Data gathered from monitoring equipment at least once each operating day;

Regulatory Requirement Synopsis - Biological | **Subpart Q - Chemical, Physical and Treatment**

---

§265.403 Inspections (continued)

(3) The construction materials of the treatment process or equipment, at least weekly; and

(4) The construction materials of, and the area immediately surrounding, at least weekly.

§265.404 Closure (May 19, 1980)

At closure, all hazardous waste and hazardous waste residues must be removed from treatment processes or equipment.

§265.405 Special requirements for ignitable or reactive wastes (May 19, 1980)

(a) Ignitable or reactive waste must not be placed in a treatment process unless the waste is treated so that the resulting mixture is no longer ignitable or reactive.

§265.406 Special requirements for incompatible wastes (May 19, 1980)

(a) Incompatible wastes, must not be placed in the same treatment process.

(b) Hazardous waste must not be placed in unwashed treatment equipment which previously held an incompatible waste.

Inspection Procedures - Subpart Q

While inspecting a chemical, physical or biological treatment unit, the inspector should consider the following areas:

- Waste types being treated.
- Operating conditions.
- Residue handling and ultimate disposal.
- Whether other emissions such as gases, vapors, or mists, or any odor causing substances are present.
- Records that show the treatment is working.
- Remember that treatment in tanks, surface impoundments and land treatment units are not covered by Subpart Q.

Part 264

Permitted Units

Inspection procedures should be developed from Chapter Three (refer back), and/or from procedures presented in Part 265.

Preceding page blank

TABLE III - 4 Permitted Unit Regulatory Requirement Synopsis

Regulatory Requirement Synopsis - Subpart B - General Facility Standards

---

§264.10 through §264.17(b) are similar to Part 265 requirements.

§264.17(c) Requirements for Ignitable, Reactive or Incompatible wastes (July 31, 1985)

When a facility must comply with the general requirements, permitted facilities must document such compliance.

§264.18 Location standards (July 15, 1985)

(a) Portions of new permitted facilities must not be located within 61 meters of a fault which has had displacement in Holocene time.

(b) A facility located in a 100 year flood plain must be designed, constructed, operated, and maintained to prevent washout unless the waste can be removed, no adverse effects will result if washout occurs.

(c) Placement of any non-containerized or bulk liquid waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited.

Inspection Procedures - Subpart B

The inspector should remember that:

- General inspection requirements for permitted facilities are usually the same as for interim status facilities.
- Compliance with location standards should be verified during the permit process.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - **Subpart C - Preparedness and Prevention**
Subpart D - Contingency Plan and Emergency Procedures
Subpart E - Manifest System, Recordkeeping and Reporting
Subpart H - Financial Requirements

Subpart C requirements are similar to Part 265 Subpart C requirements.

Subpart D requirements are similar to Part 265 Subpart D requirements.

Subpart E, §265.70 through §265.72 are similar to Part 265 requirements.

§264.73 **Operating record** requirements are similar to 265 except as given below:

The operating record must contain the following:

(7) notices to generators of appropriate permits.

(9) annual certification that a program is in place to reduce toxicity and volume of hazardous waste generated by the permittee.

Subpart E, §265.74 through §265.77 are similar to Part 265 requirements.

Subpart H requirements are similar to Part 265 Subpart H requirements.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subparts C, D, E and H

The inspector should remember that:

- General inspection requirements for permitted facilities are the usually the same as for interim status facilities.
- Permitted facilities are required to include notices to generators of appropriate permits and annual certification that a waste minimization program is in place in their operating record, whereas interim status facilities are not required to do so.
- Owner/operators may obtain waivers from the Regional Administrator (RA) from aisle space and emergency equipment requirements.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart F - Release from Solid Waste Management Units

---

§264.90 Applicability (July 15, 1985)

These regulations apply to owner/operators of facilities that treat, store or dispose of hazardous waste unless he is exempt or operates a unit which is an engineered structure, does not receive or contain liquids, has both inner and outer layers of containment, a leak detection system(s) which will be maintained and will not allow hazardous constituents to migrate beyond the outer layer.

Owner/operators of land treatment units with treatment zones that do not contain levels of constituents above background can eliminate post-closure care requirements. The post-closure care requirements also do not apply to waste piles meeting design standards and to units where there is no potential for migration into the uppermost aquifer.

§264.91 Required programs (May 19, 1980)

All facilities covered under these regulations must conduct a detection monitoring program unless hazardous constituents are detected at the compliance point. In this case, the owner/operator would conduct a compliance monitoring program. If ground water standards are exceeded, a corrective action program must be started.

§264.92 Ground-water protection standard (May 19, 1980)

The RA will establish the ground water protection standard in the facility permit.

§264.93 Hazardous constituents (April 1, 1983)

The RA will specify in the permit the hazardous constituents to which the standard applied.

§264.94 Concentration limits (April 1, 1983)

The RA will specify in the permit the concentration limits.

§264.95 Point of compliance (May 19, 1980)

The RA will specify the point of compliance in the permit. The POC is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends into the uppermost aquifer.

§264.96 Compliance period (May 19, 1980)

The compliance period is equal to the number of years in the active life of a unit and is specified in the permit by the RA.

Regulatory Requirement Synopsis - Subpart F - Release from Solid Waste Management Units (Continued)

---

§264.98 Detection monitoring program (January 31, 1985)

The owner/operator must monitor for indicator parameters that provide a reliable indication of the presence of a release to the ground water. The RA will specify the parameters in the permit.

The owner/operator must install a monitoring system at the compliance point and establish background levels for the parameters of concern. The o/o must monitor semiannually and statistically evaluate any increase or pH changes. If there is a significant increase, he must notify the RA within 7 days. If detection monitoring indicates a release, the O/O must go to compliance monitoring and obtain a permit modification.

§264.99 Compliance monitoring program (January 31, 1985)

The o/o must determine whether the regulated units are in compliance with the ground water protection standard. The o/o must determine the concentration hazardous constituents in the ground water at least quarterly. The o/o must determine the flow rate and direction in the uppermost aquifer, and analyze for all Appendix IX at least annually. If there is a statistically significant difference between the observed concentration and the groundwater protection standard for each constituent, the o/o shall notify the RA and apply to make the permit changes necessary for a corrective action program.

§264.100 Corrective action program (January 31, 1985)

The owner/operator must implement a corrective action program that prevents hazardous constituents from exceeding their ground-water protection standard by removing or treating. A ground-water monitoring program that can demonstrate the effectiveness of the program must be implemented. The o/o can terminate corrective action measures if he can demonstrate that the ground-water protection standard has not been exceeded for 3 consecutive years.

§264.101 Corrective action for solid waste management units (July 15, 1985)

The o/o of a facility must implement corrective action for releases that affect human health and the environment from any solid waste management unit. Corrective action required will be specified in the permit.

Inspection Procedures - Subpart F

The inspector should consider the following:

- Is the owner/operator doing detection or compliance monitoring?
- Are all constituents specified in the permit being monitored?
- Are complete Appendix IX scans and ground-water flow rate and direction evaluations being done as frequently as specified in the permit for compliance monitoring programs?
- Does the ground-water monitoring program follow proper procedures for sample collection, sample preservation and shipment and chain of custody?
- Does monitoring data show that either background or the ground water protection standard have been exceeded? Have the statistical evaluations been done?
- Has an RFA been performed? If not you may look at any or all Solid Waste Management Units on site.
- Is the facility under corrective action? If so, are the compliance schedules being met?

Identification of releases from solid waste management units will be done during a RCRA Facility Assessment. "RCRA Facility Assessment Guidance Manual" is available as a reference.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart G - Closure and Post-closure

---

§264.110 Applicability (May 19, 1980)

(b)(2) Post-closure requirements apply to surface impoundments and waste piles even if they remove all waste at closure

§264.112 Closure plan; amendment of plan (May 19, 1980)

(c) The owner/operator may request a permit modification to amend the closure plan any time prior to closure when changes occur that will affect the closure of the unit

§264.113 through §264.117 are similar to Part 265 requirements

§264.118 Post-closure plan; amendment of plan (May 19, 1980)

(d) The owner/operator may request a permit modification to amend the post closure plan any time during the active life or the post-closure care period when changes occur that will affect post-closure care

§264.119 through §264.120 are similar to Part 265 requirements

---

Inspection Procedures - Subpart G

- Have any amendments in closure or post-closure plans been accompanied by a request for a permit modification?
- Have post-closure plans been completed for waste piles and surface impoundments even though they will not be closed as a landfill, as required?

Regulatory Requirement Synopsis - Subpart I - Use and Management of Containers

---

§264.170 through §264.174 are similar to Part 265 requirements

§264.175 Containment (May 19, 1980)

(a) (b) Container storage areas must have a containment system designed and operated as follows:

(1) Impervious base, free of cracks;

(2) Sloped or designed to drain off leaks, spills or precipitation unless containers are elevated;

(3) System must be able to contain 10% of the volume of the free liquids in all containers or the largest container, which ever is greater;

(4) Run-on must be prevented unless the system has capacity to contain excess liquid;

(5) Accumulated liquid and waste must be removed in a timely manner.

(c) Container storage areas that do not hold wastes with free liquid do not need a containment system, except for F020, F022, F023, F026 and F027, which must always have a containment system which meet number 2 given above.

§264.176 and §264.177 are similar to Part 265 requirements

§264.178 Closure (May 19, 1980)

At closure, all hazardous wastes and associated residues must be removed from the containment system

---

Inspection Procedures - Subpart I

- Is the containment system free from cracks, gaps or other signs of deterioration and without any standing liquids (unless recent precipitation or spills have occurred)? How long has precipitation been there?
- Does the containment system have sufficient excess capacity to collect precipitation and run-on and still meet the 10% requirement for free liquids?
- Is the evaluation and disposal method of any contained liquid within the containment system adequate?
- After closure, has the decontamination of the containment system been documented?

Regulatory Requirement Synopsis - Subpart J - Tank Systems

---

§264.190 through §264.199 are identical to §265.190 through §265.199

Inspection Procedures - Subpart J

The inspector should remember that:

- The regulations applicable to above-, on-, in-, and underground tanks that can be entered apply in States without authorized RCRA Programs only, unless a State amends its statute. Requirements for unenterable, underground tank systems and leak detection requirements for all new underground tank systems apply in all States.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart K - Design of Surface Impoundments

---

§264.221 Design and operating requirements (July 15, 1985)

(a) Any surface impoundment that is not a new, a replacement or a lateral expansion must have a liner that is designed, constructed and installed to prevent any migration out of the impoundment during its active life.

(b) Waivers may be obtained from the Regional Administrator for (a).

(c) New surface impoundments, replacements or lateral expansions must have two or more liners and a leachate collection system between liners.

(d) Other liner designs can be used if they are demonstrated to be as effective as (c) and approved by the Regional Administrator.

(e) Waivers may be obtained from the Regional Administrator for (c).

(f) A surface impoundment must be designed, constructed, maintained and operated to prevent overtopping, overfilling, wind and rain action, run-on, malfunction, and human error.

(g) Dikes must be designed, constructed and maintained to prevent massive failure.

(h) The permit will specify all the requirements.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart K - Section 264.221

- What is the maintenance and condition of the dikes and any other visible portions of the surface impoundment?
- Is there any evidence of overtopping or other types of releases?

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart K - Monitoring and Inspection

---

§264.226 Monitoring and inspection (July 15, 1985)

(a) During construction and installation, liners and cover systems must be inspected for damage and imperfections

(b) While the surface impoundment is in operation, it must be inspected weekly and after storms for:

- malfunctions or improper operation of overtopping controls
- sudden drops in the level of contents
- erosion or other signs of deterioration

(c) The owner/operator must obtain certification of structural integrity

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart K - Section 264.226

- Has all documentation of inspections during construction and installation been reviewed?
- Has documentation of inspections and adequate inspection procedures been properly undertaken?

Regulatory Requirement Synopsis - Subpart K - Emergency Repairs; Contingency Plans

---

§264.227 Emergency repairs; contingency plans (July 15, 1985)

(a) A surface impoundment must be removed from service if the liquid level drops without a known reason or a dike leaks

(b) If an above condition occurs, the owner/operator must immediately

- shut off inflow
- stop leaks and contain surface leakage
- take measures to prevent catastrophic failure
- if leak cannot be stopped, empty the impoundment and notify RA within 7 days

(c) Contingency plan must specify procedure to meet requirements of (b)

(d) Once an impoundment is removed from service due to leak or failure, and prior to returning to service, the appropriate repair must be certified

(e) Once an impoundment is removed from service due to leak or failure and is not to be repaired; it must be closed.

Inspection Procedures - Subpart K - Section 264.227

- Is there evidence of a leak or failure in the operating record?
- Was the contingency plan followed and was it adequate to contain any releases in a timely manner?
- After a leak or other failure, is the unit being repaired or is it closing?

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart K - Closure and Post-closure Care

---

§264.228 Closure and Post-closure Care (July 15, 1985)

(a) At closure, the owner/operator must either

(1) remove or decontaminate all residues, equipment, subsoils and system components, or

(2) eliminate free liquid and solidify wastes so that it will support a final cover

(b) If some waste residues are left in place upon closure, the owner/operator must comply with post-closure requirements and maintain the effectiveness of the final cover and the integrity of the groundwater monitoring system.

(c) If an owner/operator plans to close under (a)(1), he still must have a contingent post-closure plan in case he cannot remove all the contaminated material. Cost estimates must also be provided for post-closure care.

§264.229 through §264.231 are similar to Part 265 requirements

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart K - Section 264.228

- Has the facility elected to clean close or to close as a landfill?
- If the facility is closing by removing or decontaminating all material, can he document this? If not, has the owner/operator implemented the contingent closure and post-closure plans?
- If the surface impoundment is closing with material in place, is the impoundment free of standing water and will (does) it support a cover?

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart L - Design of Waste Piles

---

§264.251 Design and operating requirements (January 31, 1985)

(a) A waste pile must have a liner and a leachate collection system

(b) A facility may be exempt from (a) if it can prove its design characteristics will prevent migration of hazardous constituents into ground water

(c) Run-on must be diverted around the active portion of the pile

(d) Run-off must be collected and controlled

(e) Collection and holding facilities must be emptied after storms

(f) Waste piles must be maintained in a manner that prevents dispersal of particulates by wind

§264.254 Monitoring and inspection (July 15, 1985)

(a) During construction, liners and covers must be inspected for defects

(b) Waste piles must be inspected weekly for deterioration, proper control of run-on and runoff, control of wind dispersal, and the proper function of leachate collection systems

§264.256 and §264.257 are similar to Part 265 requirements

§264.259 Special requirements for hazardous wastes F020, F021, F022 F023, F026 and F027 (January 14, 1985)

The hazardous wastes listed above (dioxin containing) must not be placed in a waste pile that is not enclosed unless the pile is operated with a management plan approved by the RA.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart L - Section 264.251, 264.254 and 264.259

- Is the removal of collected run-off a short time after storms being properly done?
- Is the evaluation and disposal of the run-off and leachate adequate?
- Has documentation of inspections conducted during construction been located and properly reviewed?
- Has documentation of weekly operational inspections been properly completed?

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart L - Closure and Post-closure Care

---

§264.258 Closure and post-closure care (May 19, 1980)

(a) At closure, the owner/operator must remove or decontaminate all residues, equipment, subsoils and system components

(b) If some waste residues are left in place upon closure, the owner/operator must close the facility and comply with post-closure requirements that apply to landfills

(c) The owner/operator of a waste pile that does not comply with the liner requirements and is not exempt must have a contingent post-closure plan in case he cannot remove all the contaminated material. Cost estimates must also be provided for post-closure care.

Inspection Procedures - Subpart L - Section 264.258

- Can the owner/operator document the removal or decontamination of all material? If not, has the owner/operator implemented the contingent closure and post-closure plans?

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Regulatory Requirement Synopsis - Subpart M - Land Treatment

---

§264.271 Treatment program (January 31, 1985)

(a) A land treatment program must be established that ensures that hazardous constituents placed in the treatment zone are degraded, or immobilized within the zone

(b) The RA will specify in the permit the hazardous constituents that must be degraded, immobilized, or transformed.

(c) The RA will specify vertical and horizontal dimensions of the treatment zone

§264.272 Treatment demonstration (April 1, 1983)

(a) For each waste that will be applied to the treatment zone, the owner/operator must demonstrate that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone

(b) In making this demonstration, the O/O may use field tests, laboratory analyses, available data, or operating data

(c) Field or laboratory data must accurately simulate operating conditions, must show that the waste will be properly degraded, and must be conducted to protect human health and the environment

§264.273 Design and operating requirements (January 31, 1985)

(a) The owner/operator must design, construct and operate to maximize degradation, transformation and immobilization.

(b)(c)(d)(f) The owner/operator must design, construct and operate to minimize run-on and control run-off and wind dispersal.

(e) Any collection basins for run-on, run-off or precipitation must be emptied expeditiously.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart M - Section 264.271 through 264.272

- Has the owner/operator obtained either a short-term or two phase permit if he is conducting laboratory or field tests as part of the land treatment demonstration?
- Removal of collected run-off and run-on in a short time after storms.
- Evaluation and disposal of the collected run-off.
- Is the facility complying with the application rates and waste types specified in the permit?

Regulatory Requirement Synopsis - Subpart M - Land Treatment

---

§264.278 Unsaturated zone monitoring (January 31, 1985)

(a) The owner/operator must monitor the soil and soil-pore liquid to determine whether any hazardous constituents migrate out of the treatment zone

(b) The owner/operator must install an unsaturated zone monitoring system at a sufficient number of sampling points to yield samples that are representative background soil-pore liquid quality and the quality of soil-pore liquid below the treatment zone

(c) Background must be established for each hazardous constituent

(d) Soil monitoring and soil-pore liquid monitoring must be conducted directly below the treatment zone

(e) Consistent sampling and analysis procedures must be used

(f) The owner/operator must determine when a statistically significant change occurs over background

(g)(h)The RA must be notified when a significant change is found that is not due to error or other sources

§264.279 Recordkeeping (January 31, 1985)

Hazardous waste application dates and rates must be included in the operating record.

§264.283 Special requirements for hazardous wastes F020, F021, F022 F023, F026 and F027

The hazardous wastes listed above (dioxin containing) must not be placed in a land treatment unit unless approved by the RA.

Inspection Procedures - Subpart M - Section 264.278, 264.279 and 264.283

- Is the soil-pore liquid and soil monitoring being conducted according to the procedures and frequency specified in the permit?

The inspector should refer to the "Permit Guidance Manual on Hazardous Waste Land Treatment Demonstrations" for a complete discussion of land treatment units.

Regulatory Requirement Synopsis - Subpart M - Closure and Post-closure Care

---

§264.280 Closure and post-closure care (May 19, 1980)

(a) (1&2) During the closure period, the owner/operator must continue all operations necessary to maximize degradation, transformation or immobilization of hazardous constituents within the treatment zone, and to minimize runoff

(3&4) Maintain run-on control and runoff management systems

(5) Control wind dispersal of hazardous waste

(6&7) Continue to comply with prohibitions (limitations) on growing food chain crops and to monitor the unsaturated zone

(8) Establish vegetative cover

(b) Notify RA after closure is complete and provide certification

(c) (1) During the post-closure care period, the owner/operator must continue all operations consistent with post-closure care activities

(2,3&4) Maintain a vegetative cover, run-on control and runoff management systems

(5) Control wind dispersal of hazardous waste

(6&7) Continue to comply with prohibitions (limitations) on growing food chain crops and to monitor the unsaturated zone

(d) If the owner/operator can demonstrate that the levels of hazardous wastes left in the soil does not exceed background, post closure care is not required

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart M - Section 264.280

- The system must still be operated and maintained to promote further degradation, immobilization and transformation during closure and post-closure care.
- Certification of closure must be provided by an independent soil scientist.
- Vegetative cover must be established unless the background levels of wastes remaining in the soil have not been exceeded.

Regulatory Requirement Synopsis - Subpart N - Landfills

---

§264.301 Design and operating requirements (July 15, 1985)

(a) Landfills not regulated under (c) below or interim status must have a liner and a leachate collection system above the liner

(b) A landfill may be exempt from (a) if the owner/operator can demonstrate that an alternate design and location characteristics prevent migration

(c) New or expanded facilities need two or more liners and a leachate collection system above and between the liners

(d) A landfill may be exempt from (c) if the owner/operator can demonstrate that an alternate design and location characteristics prevent migration

(e) The double liner requirement can be waived for monofills by the RA

(f) Run-on flow must be controlled

(g) Runoff must be diverted from active portions

(h) Collection or holding facilities must be emptied after storms

(i) Wind dispersal of particulates must be controlled

§264.303 Monitoring and inspection (July 15, 1985)

(a) Liners and cover systems must be inspected during and after construction for defects or imperfections

(b) Landfills must be inspected for deterioration and malfunctions and properly functioning leachate collection systems weekly during operation and after storms

§264.310 Closure and post-closure (July 15, 1985)

(c) Any leak detected during post-closure must be reported to the RA within 7 days

§264.316 Special requirements for hazardous wastes F020, F021, F022 F023, F026 and F027 (January 14, 1985)

The hazardous wastes listed above (dioxin containing) must not be placed in a landfill unless approved by the RA.

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart N - Section 264.301 through 264.316

- Is the owner/operator conducting the inspections as required? Are the leachate collection systems functioning properly?

Regulatory Requirement Synopsis - Subpart O - Incinerators

---

§264.341 Waste Analysis (January 31, 1985)

(a) The owner/operator must include a waste feed analysis in Part B applications

(b) Waste analysis must be conducted throughout normal operations

§264.342 Principal organic hazardous constituents (April 1, 1983)

(a) POHCs must be treated to performance standards

(b) One or more POHCs will be specified in the permit for each waste burned

§264.343 Performance standards (January 14, 1985)

(a) Destruction and removal efficiency (DRE) must equal 99.99% for each POHC and 99.9999% for POHC from dioxin containing listed wastes

(b) Stack emissions of HCL must not exceed 1.8 kg/hr or 1 percent of the acid in the gas prior to emissions control

(c) Incinerators must not emit greater than 180 mg/dry std cubic meter of particulate matter

(d) Inability to meet the performance standards of this section, despite compliance with permit conditions, may be taken as information justifying modifications, revocation, or reissuance of a permit

§264.344 Hazardous waste incinerator permits (January 31, 1985)

(a) Wastes must only be burned as authorized in the permit except for trial burns and if the waste is exempted by the RA

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart O - Sections 264.341 through 264.344

- o Have DREs for each POHC been demonstrated?
- o Do the analyses of the waste feed show that it is the same as that specified in permit?
- o Does compliance with the operating conditions ensure compliance with the performance standards? If not, a new trial burn could be ordered.

Regulatory Requirement Synopsis - Subpart O - Incinerators

---

§264.345 Operating requirements (January 31, 1985)

(a) an incinerator must be operated under the requirements specified in the permit

(b) for each waste feed, the permit will specify acceptable operating conditions

(c) during start-up or shut-down, hazardous wastes must not be incinerated unless operating conditions are met

(d) fugitive emissions must be controlled in the combustion zone

(e) incinerators must have automatic waste feed shut-off systems when conditions deviate from limits including CO, waste feed rate, temperature, or combustion gas velocity indicators

(f) incinerators must cease operation when limits in the permit are exceeded

§264.347 Monitoring and inspection (January 31, 1985)

(a) the owner/operator must conduct the following monitoring and inspections:

(1) combustion temperature, waste feed rate, and combustion gas velocity must be monitored continuously

(2) carbon monoxide must be monitored continuously

(3) sampling and analysis of the waste and emissions must be conducted as specified to determine DRE

(b) incinerators must be inspected daily for leaks, spills etc.

(c) emergency and cutoff systems and associated alarms must be tested weekly

(d) monitoring and inspection data must be recorded in operating log

TABLE III-4 Permitted Unit Regulatory Requirement Synopsis (continued)

Inspection Procedures - Subpart O - Section 264.345 and 264.347

- o Are the operating requirements specified in the permit being met at all times when incinerating hazardous wastes?
- o Are the emergency cut-off systems operational and set at specified limits? Are the indicators for CO, temperature, et cetera, tied to the cut-off system?
- o Are the continuous monitoring systems working properly?
- o Has equipment been checked for leaks, fugitive emissions, and structural integrity?
- o Are waste types consistent with those specified in the permit?

Regulatory Requirement Synopsis - Part 266 -Subpart C - Recyclable Materials Used in a Manner Constituting Disposal

---

§266.20 Applicability (May 19, 1980)

(a) These regulations apply to recyclable materials applied on land:

(1) Without mixing with other substances

(2) Mixed with substances that do not react with the material

(3) Combined material is not produced for public use

(b) Products produced from recyclable material for public use that are used in a manner constituting disposal are not subject to regulation if they are inseparable. Commercial fertilizers is an example.

§266.21 Standards for Generators and Transporters (May 19, 1980)

Generators and transporters of the applicable recyclable materials are subject to requirements of Parts 262 and 263 as well as the notification requirement.

§266.22 Standards for Storage (May 19, 1980)

Owner/operators that store recyclable material destined for disposal are regulated under applicable provisions of Subparts A through L of Parts 264 and 265, Parts 270 and the notification requirement.

§266.23 Standards for Users (July 15, 1985)

(a) Owner/operators that use recycled materials destined for disposal are regulated under Subparts A through N of Parts 264 and 265 and Parts 270 and the notification requirement.

(b) The use of oil or other material that is contaminated with dioxin for dust suppression or road treatment is prohibited.

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Inspection Procedures - Subpart C - Recyclable Materials Used in a Manner Constituting Disposal

---

- Does the waste and management practice meet the criteria given in 266.20?
- If waste oil or other material is being used for dust suppression or road treatments, has it been tested for dioxin?

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Regulatory Requirement Synopsis - Subpart D - Hazardous Waste Burned for Energy Recovery

---

§266.30 Applicability (November 29, 1985)

(a) These regulations apply to hazardous waste burned in any boiler or industrial furnace for energy recovery. Fuel produced from hazardous waste processing, blending or other treatment is also hazardous waste fuel. These regulations do not apply to gas.

(b) Used oil, exempt hazardous waste and small quantity generator waste that is burned for energy recovery is not covered by these requirements.

§266.31 Prohibitions (November 29, 1985)

(a) A person may market hazardous waste fuel only:

(1) To persons who have an EPA identification number

(2) To persons who intend to burn it in boilers or industrial furnaces

(b) Hazardous waste fuel may be burned only in industrial furnaces and boilers.

§266.32 Standards for Generators (November 29, 1985)

(a) Generators are subject to Part 262

(b) Generators who market the waste as fuel are subject to 266.34

(c) Generators who are burners are subject to 266.35

§266.33 Standards for Transporters (November 29, 1985)

Transporters are subject to Part 263.

§266.34 Standards for Marketers of Hazardous Waste Fuel (November 29, 1985)

(b) Notification

A marketer must notify EPA of activity even if he has an EPA identification number for other hazardous waste management activities.

(c) Storage

Applicable provisions of 262.34 and Subpart A-L Parts 264 or 265 and Part 270 must be followed.

Regulatory Requirement Synopsis - Subpart D - Hazardous Waste Burned for Energy Recovery (continued)

---

§266.34 Standards for Marketers of Hazardous Waste Fuel (continued)

(d) Off-site shipment

The standards for generators apply to marketers.

(e) Required notices

Before shipment to any burner or other marketer, the first marketer must obtain a certification stating that EPA has been notified of waste-as-fuel activity; recipient will only burn waste in an industrial furnace or boiler;

(f) Record keeping

In addition to the record keeping requirements of Parts 262, 264 and 265 the marketer must keep a copy of each certification for three years.

§266.35 Standards for Burners (November 29, 1985)

The burner must comply with the previously stated prohibitions, notification requirements, storage and record keeping provisions and required notices.

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Inspection Procedures - Subpart D - Hazardous Waste Burned for Energy Recovery

---

- Does the energy recovery unit meet the definition of either industrial furnace or boiler?
- Does the waste burned-as-fuel generate at least 5,000 to 8,000 BTU per pound in order to be legitimately considered fuel?

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Regulatory Requirement Synopsis - Subpart E - Used Oil Burned for Energy Recovery

---

§266.40 Applicability (November 29, 1985)

(b) "Used oil" is any oil refined from crude oil and has been used resulting in impurities.

(c) Used oil containing more than 1000 ppm of total halogens is presumed to be a hazardous waste regulated under Subpart D.

(d) Used oil that exhibits a characteristic of hazardous waste or contains waste from a small quantity generator is regulated under this Subpart.

(e) Used oil that exceeds any specification level is subject to this Subpart when burned for energy recovery but is termed 'off-specification used oil fuel'.

§266.41 Prohibitions (November 29, 1985)

(a) A person may market off-specification used oil only to burners or other marketers who have notified EPA and received a number and to burners who burn only in an industrial furnace or boiler. A boiler may be a space heater if the oil is from do-it-yourselfers, burns less than 0.5 million BTUs per hour and combustion gases are vented to the outdoors.

§266.43 Standards for marketers (November 29, 1985)

(a) The following persons are not marketers subject to this regulation: generators or collectors who provide oil to persons who process it;. marketers who do not obtain the oil from generators or market off-specification oil.

(b) Marketers must:

(1) Obtain analysis of the used oil

(2&3) Follow prohibitions in 266.41 and notify EPA of activity

(4) Use an invoice system for off-specification oil containing an invoice number, his and the recipient's EPA identification number, name and address of both facilities, quantity, date and this statement: This used oil is subject to EPA regulation under 40 CFR Part 266.

Regulatory Requirement Synopsis - Subpart E - Used Oil Burned for Energy Recovery (continued)

---

§266.43 Standards for marketers (continued)

(5) Before shipment to any burner or other marketer, the first marketer must obtain a certification stating that EPA has been notified of waste oil activity; recipient will only burn waste in an industrial furnace or boiler;

(6) Marketers of oils that meet specification must keep the analyses, the name and address of the recipient, quantity of fuel delivered, date, a cross reference to the analysis for three years.

(6ii) Marketers of off-spec oil must keep a copy of each invoice and certification for three years.

§266.44 Standards for Burners (November 29, 1985)

The burner must comply with the previously stated prohibitions, notification requirements, storage and record keeping provisions and required notices.

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Inspection Procedures - Subpart E - Used Oil Burned for Energy Recovery

---

o Has the used-oil been analyzed to determine if it meets specifications?

o Does the energy recovery unit meet the definition of boiler or industrial furnace?

Regulatory Requirement Synopsis - Subpart F - Recyclable Materials Utilized for Precious Metal Recovery

---

§266.70 Applicability and Requirements (May 19, 1980)

(a) These regulations apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium.

(b) Persons who generate, transport or store the above materials must:

(1) Notify EPA, and

(2) Comply with Subpart B Manifest regulations, Part 262 (generators); 263.20 and 263.21 (transporters); and 265.71 (use of the manifest system) and 265.72 (manifest discrepancies).

(c) Persons who store this material must keep the following records:

(1) Records showing volume of material at beginning of year;

(2) Amount of materials generated or received during year;

(2) Amount of materials remaining at the end of the year.

(d) Recyclable materials regulated under this subpart that are accumulated speculatively are subject to all provisions of Parts 262 through 265, 270 and 124.

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Inspection Procedures - Subpart F - Recyclable Materials Used for Precious Metal Recovery

---

- Is the recyclable material being kept for speculative purposes?

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Regulatory Requirement Synopsis - Subpart G - Reclamation of Spent Lead-Acid Batteries

---

(a) Persons who generate, transport, or collect spent batteries but do not reclaim them are not subject to these regulations.

(b) Owner/operators of facilities that reclaim spent batteries must:

(1) Notify EPA

(2) Comply with all applicable provisions in Subpart A,B (not waste analysis), C,D,E (not 264.71 or 264.72) and F through L of Part 264.

TABLE III-5 Management of Specific Hazardous Wastes and Types of Hazardous Waste Management Facilities (continued)

Inspection Procedures - Subpart G - Spent Lead-Acid Batteries Being Reclaimed

---

- Has the reclaiming facility complied with the applicable parts of Part 264?

Regulatory Requirement Synopsis - Part 268 - Subpart A - General

---

§268.1 Purpose, scope and applicability (November 7, 1986)

(b) Prohibited wastes cannot be land disposed except under the following conditions:

(c) (1) Case-by-case extension granted under 268.5 or a nation-wide variance.

(2) No-migration petition granted under 268.6.

(3) Waste is contaminated soils and debris from CERCLA sites or RCRA Corrective Actions (Applicable until 11/[illegible]/88).

(4) Conditionally exempt small quantity generators (less than 100 kg per month).

(5) Farmers disposing of waste pesticides.

§268.3 Dilution prohibited as a substitute for treatment (November 7, 1986)

No one shall dilute a restricted waste or the residual from a restricted waste in order to comply with the treatment standards, or circumvent a restriction or effective date.

§268.4 Treatment surface impoundment exemption (November 7, 1986)

Restricted wastes can continue to be treated in surface impoundments provided treatment occurs in the impoundment, and residues not meeting treatment standards are removed annually. The impoundments must meet minimum technology design requirements as applicable and have appropriate ground-water monitoring. Evaporation as the primary form of treatment is not allowed.

Inspection Procedures - Part 268.1. 268.3 and 268.4

The inspector should check the following when verifying compliance with land disposal ban requirements:

- Do any of the exemptions apply to the waste or have extensions or petitions been granted?

Regulatory Requirement Synopsis - Part 268 - Section 268.7

§268.7 Waste analysis (November 7, 1986)

(a) The generator must evaluate his waste. He can do so by the Toxicity Characteristic Leaching Procedure (TCLP) or by Total Constituent Analysis (TCA) or;

(b) Apply knowledge of the waste generating process.

(1) If the waste is restricted, prior to land disposal, the generator must notify the treatment facility of the appropriate treatment standard and include the following information:

- EPA hazardous waste number
- treatment standard
- manifest number
- waste analysis data.

(2) If the waste is not restricted (i.e.can be land disposed) the generator must submit a notice, including the information above plus signed certification to the disposal facility.

(3) If the waste is subject to a case-by-case extension, a no-migration petition, or a nationwide variance, the generator must forward such notice to the land disposal facility.

(c) The residuals from treating restricted wastes must be tested using TCLP or TCA at the treatment facility to assure that the treatment extract meets applicable treatment standards. A notice and a certification for either treatment levels expressed as concentrations or for treatment with approved technologies must be sent with the waste to the land disposal facility.

TABLE III-6 Land Disposal Restrictions Regulatory Requirement Synopsis (cont.)

Inspection Procedures - Part 268.7

The inspector should verify the compliance status with respect to the following activities:

- o Has an adequate analysis been done to determine if the waste is restricted?
- o Has the owner/operator (or generator) been providing proper notice and certification to all off-site facilities?
- o Is the Waste Analysis Plan adequate and does it reflect LDR testing requirements?
- o Is the waste properly classified or characterized?
- o Is the facility submitting and/or receiving notice/certifications?
- o Is the facility performing an adequate review of incoming wastes?

Regulatory Requirement Synopsis - Part 268 - Subpart C - Prohibition on Land Disposal

---

§268.30 Solvent wastes (November 7, 1986)

(a) As of November 8, 1986, hazardous wastes numbered F001, F002, F003, F004 and F005 are prohibited from land disposal except in an injection well unless the waste is a:

(1) Small quantity generator waste (100-1000 kg/month)

(2) Solvent waste from RCRA and CERCLA cleanups

(3) Solvent/water, solvent containing sludge or solvent soil mixtures containing less than 1 percent total solvent constituents.

(b) After November 8, 1988, the above wastes are prohibited from land disposal. Until 1988, these wastes can only be land disposed in facilities that meet applicable design requirements (268.5 (u)(2)).

§268.31 Dioxin containing wastes (November 7, 1986)

As of November 8, 1988, these wastes, F020, F021, F023, F026, F027 and F028, are prohibited from land disposal. Until 1988, these wastes can only be land disposed in facilities that meet applicable design requirements.

§268.32 California List Wastes (July 8, 1987)

(a) As of July 8, 1987, the following hazardous wastes are prohibited from land disposal except in an injection well: liquid wastes with pH less than 2.0, liquid wastes with PCB concentrations greater than 50 ppm, and dilute waste waters containing halogenated organic compounds between 1,000 mg/l and 10,000 mg/l. Liquids containing concentrations of the following metals are also prohibited: arsenic (500 mg/l), cadmium (100 mg/l), chromium as VI(500 mg/l), lead (500 mg/l), mercury (20 mg/l), nickel (134 mg/l), selenium (100 mg/l) and thallium (130 mg/l) (These are statutory levels which are not yet codified).

(e) As of July 8, 1989, the following hazardous wastes are prohibited from all forms of land disposal: other liquid wastes with HOCs greater or equal to 1,000 mg/l, non-liquid wastes with HOCs greater or equal to 1,000 mg/kg.

TABLE III-6 Land Disposal Restrictions Regulatory Requirement Synopsis (cont.)

Inspection Procedures - Part 268 Subpart C

The inspector should verify the compliance status with respect to the following activities:

- Land disposal of restricted wastes that are not exempted is not permissable after the effective date given for each waste.

Regulatory Requirement Synopsis - Part 268 - Subpart D - Treatment Standards

---

§268.40 Applicability of treatment standards (July 8, 1987)

A restricted waste or waste residual that meets the treatment standards expressed as concentrations in waste extract can be land disposed. A restricted waste for which a treatment technology is specified may be land disposed after treatment with that technology.

§268.42 Treatment standards expressed as specific technologies (July 8, 1987)

Liquid wastes containing PCBs greater than 500 ppm must be incinerated according to 40 CFR 761.70. PCB wastes equal or greater than 50 ppm but less than 500 may either be incinerated or burned in high efficiency boilers. Non-liquid hazardous wastes containing HOCs in total concentrations greater than 1000 mg/kg must be incinerated according to either 264, subpart O, or 265, subpart O. Alternative treatment that can be demonstrated may be approved by the Administrator.

§268.44 Variances (November 7, 1986)

If a generator cannot treat his waste to meet the standards in waste extracts, he may petition the Administrator for a variance.

Inspection Procedures - Part 268 Subpart D

The inspector should verify the compliance status with respect to the following activities:

- Do all restricted wastes (not otherwise exempted) being land disposed either meet the treatment standards for concentration in the extract of the waste or treatment residual or are treated using specified technology(ies)?

Regulatory Requirement Synopsis - Part 268 - Subpart E - Prohibitions on Storage of Restricted Waste

---

§268. 50 Prohibitions on storage of restricted waste (November 7, 1986)

Storage of restricted waste is prohibited unless accumulation of such quantities is necessary to facilitate proper recovery, treatment or disposal. Storage for accumulation purposes by a TSDF may occur only in tanks or containers, and only up to one year without having to prove that accumulation is necessary. After that time, the owner/ operator must provide proof that accumulation time is required. Storage restrictions do not apply to exempted wastes or those wastes meeting treatment standards. PCB wastes must be stored at a facility that meets the requirements of 40 CFR 761.65(b). Storage of PCB wastes can be up to but not exceeding one year.

Inspection Procedures - Part 268 Subpart D

- Are restricted wastes stored only in tanks or containers?
- Is each container at the TSDF used to accumulate wastes marked with the contents and accumulation start date? Is this information provided in the operating record?
- Is each tank at the TSDF used to accumulate wastes marked with the amount and the accumulation start date? Tanks have the option of displaying the information or having the required information in the operating record.
- Has a year expired since the start of the accumulation period?

The 1 year period is only a benchmark which shifts the burden of proof from EPA to the facility. Up to 1 year, EPA bears the burden to show that the facility is storing restricted waste longer than necessary. After 1 year, the facility must substantiate that storage is necessary. This does not preempt EPA from requiring a facility to remove its waste from storage anytime within a year if it determines that the facility has sufficient quantity to facilitate proper treatment, recovery or disposal.

TABLE III-6 Land Disposal Restrictions Regulatory Requirement Synopsis (cont.)

APPENDIX IV

INSPECTION CHECKLISTS

SECTION		PAGE
Exhibit IV-1.	General Inspection Information Form	IV-1
Exhibit IV-2.	General Facility Checklist	IV-2
Exhibit IV-3.	Land Disposal Restrictions Checklist	IV-8
Exhibit IV-4.	Generators Checklist	IV-10
Exhibit IV-5.	Transporters Checklist	IV-15
Exhibit IV-6.	Containers Checklist	IV-18
Exhibit IV-7.	Surface Impoundments Checklist	IV-20
Exhibit IV-8.	Waste Piles Checklist	IV-25
Exhibit IV-9.	Land Treatment Checklist	IV-28
Exhibit IV-10.	Landfills Checklist	IV-34
Exhibit IV-11.	Incinerators Checklist	IV-38
Exhibit IV-12.	Thermal Treatment Checklist	IV-41
Exhibit IV-13.	Ground-Water Monitoring Checklist	IV-44
Exhibit IV-14.	Waste Information Worksheet	IV-51

EXHIBIT IV-1

GENERAL SITE INSPECTION INFORMATION FORM

A. Site Name B. Street (or other identifier)

C. City D. State E. Zip Code F. County Name

G. Site Operator Information

1. Name 2. Telephone Number

3. Street 4. City 5. State 6. Zip Code

H. Site Description

I. Type of Ownership

__1. Federal __2. State __3. County __4. Municipal __5. Private

J.

__1. Generator __2. Transporter __3. Treatment __4. Storage __5. Disposal

K. Regulatory Status

__1. Interim Status __3. Part B Permit Application Submitted

__2. Permitted Facility __4. Part B Permit Application in Preparation

L.

1. Principal Inspector Name 3. Organization

2. Title 4. Telephone No. (area code and No.)

M. Inspection Participants

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

EXHIBIT IV-2

GENERAL FACILITY CHECKLIST

Section A - General Facility Standards

1. Does facility have EPA Identification No.? __Yes __No

   a. If yes, EPA I.D. No. __ __ __ __ __ __ __ __ __ __ __ __
   If no, explain. ____________________

2. Has facility received hazardous waste from a foreign source? __Yes __No

   a. If yes, has it filed a notice with the Regional Administrator? __Yes __No

Waste Analysis

3. Does facility maintain a copy of the waste analysis plan at the facility? __Yes __No

   a. If yes, does it include:

      1. Parameters for which each waste will be analyzed? __Yes __No
      2. Test methods used to test for these parameters? __Yes __No
      3. Sampling method used to obtain sample? __Yes __No
      4. Frequency with which the initial analyses will be reviewed or repeated? __Yes __No
      5. (For offsite facilities) waste analyses that generators have agreed to supply? __Yes __No
      6. (For offsite facilities) procedures which are used to inspect and analyze each movement of hazardous waste, including:

         a. Procedures to be used to determine the identity of each movement of waste. __Yes __No
         b. Sampling method to be used to obtain representative sample of the waste to be identified. __Yes __No

4. Does the facility provide adequate security through:

   a. 24-hour surveillance system (e.g., television monitoring or guards)? __Yes __No

   OR

(continued)

EXHIBIT IV-2 (continued)

b. 1. Artificial or natural barrier around facility (e.g., fence or fence and cliff)? __Yes __No

Describe ______________________________

AND

2. Means to control entry through entrances (e.g., attendant, television monitors, locked entrance, controlled roadway access)? __Yes __No

Describe ______________________________

General Inspection Requirements

5. Does the owner/operator maintain a written schedule at the facility for inspecting:

a. Monitoring equipment? __Yes __No
b. Safety and emergency equipment? __Yes __No
c. Security devices: __Yes __No
d. Operating and structural equipment? __Yes __No
e. Types of problems of equipment:

1. Malfunction __Yes __No
2. Operator error __Yes __No
3. Discharges __Yes __No

6. Does the owner/operator maintain an inspection log? __Yes __No

a. If yes, does it include:

1. Date and time of inspection? __Yes __No
2. Name of inspector? __Yes __No
3. Notation of observations? __Yes __No
4. Date and nature of repairs or remedial action? __Yes __No

b. Are there any malfunctions or other deficiencies not corrected? (Use narrative explanation sheet.) __Yes __No

Personnel Training

7. Does the owner/operator maintain personnel training records at the facility? __Yes __No

(continued)

EXHIBIT IV-2 (continued)

How long are they kept? ____

a. If yes, do they include:

1. Job title and written job description of each position? __Yes __No
2. Description of type and amount of training? __Yes __No
3. Records of training given to facility personnel? __Yes __No

Requirements for Ignitable, Reactive, or Incompatible Waste

8. Does facility handle ignitable or reactive wastes? __Yes __No

a. If yes, is waste separated and confined from sources of ignition or reaction (open flames, smoking, cutting and welding, hot surfaces, frictional heat), sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat?

1. If yes, use narrative explanation sheet to describe separation and confinement procedures.
2. If no, use narrative explanation sheet to describe sources of ignition or reaction.

b. Are smoking and open flame confined to specifically designated locations? __Yes __No

c. Are "No Smoking" signs posted in hazardous areas? __Yes __No

d. Are precautions documented (Part 264 only)? __Yes __No

9. Check containers

a. Are containers leaking or corroding? __Yes __No

b. Is there evidence of heat generation from incompatible wastes? __Yes __No

Section B - Preparedness and Prevention

1. Is there evidence of fire, explosion, or contamination of the environment? __Yes __No

If yes, use narrative explanation sheet to explain.

(continued)

EXHIBIT IV-2 (continued)

2. Is the facility equipped with:

    a. Internal communication or alarm system? __Yes __No

        1. Is it easily accessible in case of emergency? __Yes __No

    b. Telephone or two-way radio to call emergency response personnel? __Yes __No

    c. Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment? __Yes __No

    d. Water of adequate volume for hoses, sprinklers, or water spray system? __Yes __No

        1. Describe source of water ______________________________

3. Is there sufficient aisle space to allow unobstructed movement of personnel and equipment? __Yes __No

4. Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility? (Layout of facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, possible evacuation routes.) __Yes __No

5. In the case that more than one police or fire department might respond, is there a designated primary authority? __Yes __No

    a. If yes, name primary authority ______________________________

6. Does the owner/operator have phone numbers of and agreements with State emergency response teams, emergency response contractors, and equipment suppliers? __Yes __No

    a. Are they readily available to all personnel? __Yes __No

7. Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility? __Yes __No

8. If State or local authorities decline to enter, is this entered in the operating record? __Yes __No

(continued)

EXHIBIT IV-2 (continued)

Section C - Contingency Plan and Emergency Procedures

1. Is a contingency plan maintained at the facility? __Yes __No
    a. If yes, is it a revised SPCC Plan? __Yes __No
    b. Does contingency plan include:
        1. Arrangements with local emergency response organizations? __Yes __No
        2. Emergency coordinators' names, phone numbers, and addresses? __Yes __No
        3. List of all emergency equipment at facility and descriptions of equipment? __Yes __No
        4. Evacuation plan for facility personnel? __Yes __No
2. Is there an emergency coordinator on site or on call at all times? __Yes __No

Section D - Manifest System, Recordkeeping, and Reporting

1. Does facility receive waste from offsite? __Yes __No
    a. If yes, does the owner/operator retain copies of all manifests? __Yes __No
        1. Are the manifests signed and dated and returned to the generator? __Yes __No
        2. Is a signed copy given to the transporter? __Yes __No
2. Does the facility receive any waste from a rail or water (bulk shipment) transporter? __Yes __No
    a. If yes, is it accompanied by a shipping paper? __Yes __No
        1. Does the owner/operator sign and date the shipping paper and return a copy to the generator? __Yes __No
        2. Is a signed copy given to the transporter? __Yes __No
3. Has the owner/operator received any shipments of waste that were inconsistent with the manifest (manifest discrepancies)? __Yes __No
    a. If yes, has he attempted to reconcile the discrepancy with the generator and transporter? __Yes __No
        1. If no, has Regional Administrator been notified? __Yes __No

(continued)

EXHIBIT IV-2 (continued)

4. Does the owner/operator keep a written operating record at the facility? __Yes __No

    a. If yes, does it include:

        1. Description and quantity of each hazardous waste received? __Yes __No
        2. Methods and dates of treatment, storage, and disposal? __Yes __No
        3. Location and quantity of each hazardous waste at each location? __Yes __No
        4. Cross-references to manifests/shipping papers? __Yes __No
        5. Records and results of waste analyses? __Yes __No
        6. Report of incidents involving implementation of the contingency plan? __Yes __No
        7. Records and results of required inspections? __Yes __No
        8. Monitoring or testing analytical data (Part 264)? __Yes __No
        9. Closure cost estimates and, for disposal facilities, post-closure cost estimates (Part 264)? __Yes __No
        10. Notices of generators as specified in §264.12(b) (Part 264)? __Yes __No

5. Does the facility submit a biennial report by March 1 every even-numbered year? __Yes __No

    a. If yes, do reports contain the following information:

        1. EPA I.D. number? __Yes __No
        2. Date and year covered by report? __Yes __No
        3. Description/quantity of hazardous waste? __Yes __No
        4. Treatment, storage, and disposal methods? __Yes __No
        5. Monitoring data under §265.94(a)(2) and (b)(2) (Part 265)? __Yes __No
        6. Most recent closure and post-closure cost estimates? __Yes __No
        7. For TSD generators, description of efforts to reduce volume/toxicity of waste generated, and actual comparisons with previous year? __Yes __No
        8. Certification signed by owner/operator? __Yes __No

6. Has the facility received any waste (that does not come under the small generator exclusion) not accompanied by a manifest? __Yes __No

    a. If yes, has he submitted an unmanifested waste report to the Regional Administrator? __Yes __No

7. Does the facility submit to the Regional Administrator reports on releases, fires, and explosions; contamination and monitoring data; and facility closure? __Yes __No

EXHIBIT IV-3

LAND DISPOSAL RESTRICTIONS CHECKLIST*

1. Are hazardous wastes land-disposed on site? ("Land disposal" includes placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, concrete vault, or bunker intended for disposal purposes; and placement in or on the land by means of open detonation and open burning where residues continue to exhibit hazardous characteristics). __Yes __No
   a. If yes, are one or more of the following circumstances true:
      1. Granted extension from effective date pursuant to §268.5? __Yes __No
      2. Granted exemption from a prohibition pursuant to a petition under §268.6? __Yes __No
      3. Disposing of soil or debris resulting from a CERCLA response action or a RCRA corrective action, which will not be prohibited until November 8, 1988? __Yes __No
      4. Facility is a small quantity generator of less than 100 kg of hazardous waste per month? __Yes __No
2. Are restricted wastes or residuals from treatment of a restricted waste diluted in any way prior to disposal? __Yes __No
3. Are there active surface impoundments used for treatment of hazardous wastes? __Yes __No
   a. If yes, does the unit's design and operation meet the requirements set forth in §268.4? __Yes __No
4. Has the facility sought exemption from any prohibition under Subpart C of §268 for the disposal of a restricted hazardous waste? __Yes __No
   a. If yes, has the facility's demonstration included the required components (waste I.D., waste analysis, comprehensive environmental characterization of unit site, QA/QC plan, sampling, testing, modeling)? __Yes __No
5. Has the facility determined whether it generates a restricted waste through waste analysis? __Yes __No
   a. If yes, is the facility, in fact, handling a restricted waste(s)? __Yes __No

(continued)

EXHIBIT IV-3 (continued)

b. If yes, does the restricted waste require treatment? __Yes __No

c. If yes, has the generator notified the treatment facility in writing, and does the notification include all required components ([PA hazardous waste number, corresponding treatment standard, manifest number of shipment)? __Yes __No

6. Does the facility handle EPA Hazardous Waste Nos. F001 through F005 (solvent wastes)? __Yes __No

   a. If yes, do any of the following conditions apply:

      1. The generator of the solvent waste is a small quantity generator (not more than 1000 kg/month)? __Yes __No
      2. The solvent waste is generated from a CERCLA response corrective action? __Yes __No
      3. The solvent waste is a solvent-water mixture, solvent containing sludge, or Solvent-contaminated soil (non-CERCLA or RCRA corrective action) containing less than 1 percent total FOOL through F005 solvent constituents. __Yes __No

   b. If no, have any of these restricted wastes been land-disposed (except in an injection well) since November 8, 1986? __Yes __No

7. Does the facility handle EPA Hazardous Waste Nos. F020, F021, F023, F026, F027, or F028 (dioxincontaining wastes)? __Yes __No

   a. If yes, do any of the following conditions apply:

      1. Wastes are treated to meet standards of Subpart D of §268? __Yes __No
      2. Wastes are disposed of at a facility that has been granted a petition? __Yes __No
      3. An extension has been granted? __Yes __No

   b. If no, will these restricted wastes be land disposed after November 8, 1988? __Yes __No

8. Are restricted wastes being treated? __Yes __No

   a. If yes, have any of their associated hazardous constituents exceeded the "Constituent in Waste Extract" (CWE) levels? __Yes __No

*See OSWER Dir. No. 9938.1A (LDR Inspection Manual) for more detailed guidance!

EXHIBIT IV-4

GENERATOR'S CHECKLIST

Section A - EPA Identification No.

1. Does generator have EPA I.D. No? __Yes __No
    a. If yes, EPA I.D. No. ______________________________

Section B - Manifest

1. Does generator ship waste offsite? __Yes __No
    a. If no, do not fill out Sections B and D.
    b. If yes, identify primary offsite facility(s). Use narrative explanation sheet.
2. Does generator use manifest? __Yes __No
    a. If no, is generator a small quantity generator (generating between 100 and 1000 kg/month)? __Yes __No
        1. If yes, does generator indicate this when sending waste to a TSD facility? __Yes __No
    b. If yes, does manifest include the following information?
        1. Manifest document No. __Yes __No
        2. Generator's name, mailing address, telephone No. __Yes __No
        3. Generator EPA I.D. No. __Yes __No
        4. Transporter Name(s) and EPA I.D. No.(s) __Yes __No
        5. a. Facility name, address, and EPA I.D. No. __Yes __No
            b. Alternate facility name, address, and EPA I.D. No. __Yes __No
            c. Instructions to return to generator if undeliverable __Yes __No
        6. Waste information required by DOE - shipping name, quantity (weight or vol.), containers (type and number) __Yes __No

(continued)

EXHIBIT IV-4 (continued)

7. Emergency information (optional) (special handling instructions, telephone No.) __Yes __No

8. Is the following certification on each manifest form? __Yes __No

This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

9. Does generator retain copies of manifests? __Yes __No

If yes, complete a through e.

a. 1. Did generator sign and date all manifests? __Yes __No
   2. Who signed for generator?

Name ______________________ Title ______________________

b. 1. Did generator obtain handwritten signature and date of acceptance from initial transporter? __Yes __No
   2. Who signed and dated for transporter?

Name ______________________ Title ______________________

c. Does generator retain one copy of manifest signed by generator and transporter? __Yes __No

d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? __Yes __No

e. Does generator retain copies for 3 years? __Yes __No

Section C - Hazardous Waste Determination

1. Does generator generate solid waste(s) listed in Subpart D (List of Hazardous Waste)? __Yes __No

a. If yes, list waste and quantities (include EPA Hazardous Waste No.) ______________________

(continued)

EXHIBIT IV-4 (continued)

2. Does generator generate solid waste(s) listed in Subpart C that exhibit hazardous characteristics? (corrosivity, ignitability, reactivity, EP toxicity) __Yes __No

    a. If yes, list wastes and quantities (include EPA Hazardous Waste No.) ____________________

    b. Does generator determine characteristics by testing or by applying knowledge of processes? ____________________

        1. If determined by testing, did generator use test methods in Part 261, Subpart C (or equivalent)? __Yes __No

            a. If equivalent test methods used, attach copy of equivalent methods used.

3. Are there any other solid wastes generated by generators? __Yes __No

    a. If yes, did generator test all wastes to determine nonhazardous characteristics? __Yes __No

        1. If no, list wastes and quantities deemed nonhazardous or processes from which nonhazardous waste was produced (use additional sheet if necessary).

____

____

____

Section D - Pretransport Requirements

1. Does generator package waste in accordance with 49 CFR 173, 178, and 179 (DOT requirements)? __Yes __No

2. a. Are containers to be shipped leaking or corroding? __Yes __No

    b. Use sheet to describe containers and condition.
    c. Is there evidence of heat generation from incompatible wastes in the containers? __Yes __No

3. Does generator follow DOT labeling requirements in accordance with 49 CFR 172? __Yes __No

4. Does generator mark each package in accordance with 49 CFR 172? __Yes __No

(continued)

EXHIBIT IV-4 (continued)

5. Is each container of 110 gallons or less marked with the following label? __Yes __No

Label saying: HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest policy or public safety authority or the U.S. Environmental Protection Agency.

Generator name(s) and address(es) ____________________

____

Manifest document No. ____________ ______________

6. Does generator have placards to offer to transporters? __Yes __No

7. Accumulation time

   a. Are containers used to temporarily store waste before transport? __Yes __No

      1. If yes, is each container clearly dated: Also, fill out rest of No. 7 (accum. time) __Yes __No

   b. 1. Does generator inspect containers for leakage or corrosion? (265.174 - Inspections) __Yes __No

      2. If yes, with what frequency? __________

   c. Does generator locate containers holding ignitable or reactive waste at least 15 meters (50 feet) from the facility's property line? (265.176 - Special Requirements for Ignitable or Reactive Wastes) __Yes __No

NOTE: If tanks are used, fill out checklist for tanks.

   d. Are the containers labeled and marked in accordance with Section D-3, -4, and -5 of this form? __Yes __No

NOTE: If generator accumulates waste on site, fill out checklist for General Facilities, Subparts C and D.

   e. Does generator comply with requirements for personnel training? (Attach checklist for 265.16 - Personnel Training.) __Yes __No

8. Describe storage area. Use photos and narrative explanation sheet.

(continued)

EXHIBIT IV-4 (continued)

Section E - Recordkeeping and Records

1. Does generator keep the following reports for 3 years?

   a. Manifests and signed copies from designated facilities __Yes __No
   b. Annual reports __Yes __No
   c. Exception reports __Yes __No
   d. Test results __Yes __No

2. Where are the records kept (at facility or elsewhere)? ________________

3. Who is in charge of keeping the records?

   Name ______________________________ Title __________________________

Section F - Special Conditions

1. Has generator received from or transported to a foreign source any hazardous waste? __Yes __No

   a. If yes, has he filed a notice with the Regional Administrator? __Yes __No
   b. Is this waste manifested and signed by a foreign cosignee? __Yes __No
   c. If generator transported wastes out of the country, has he received confirmation of delivered shipment? __Yes __No

EXHIBIT IV-5

TRANSPORTERS CHECKLIST

Section A - EPA I.D. No.

1. Does transporter have an EPA I.D. No.? __Yes __No
    a. If yes, what is EPA I.D.? ______________________________

Section B - Transfer Facility Requirements

1. Does transporter store wastes on site? __Yes __No
    a. If yes, does transporter store wastes longer than 10 days? __Yes __No

Section C - Manifests

1. Does transporter use manifests? __Yes __No
    a. If yes, are manifests signed and dated? __Yes __No
    b. Does transporter return signed copies of manifests to generators? __Yes __No
    c. Does transporter carry manifests with waste shipments? __Yes __No
    d. Does transporter obtain delivery date and signature of owner/operator at delivery? __Yes __No
    e. Does transporter retain copies? __Yes __No
    f. Does transporter give remaining copies to accepting transporter or facility? __Yes __No
    g. Is transporter a water (bulk shipment) transporter? __Yes __No
        1. If yes, is waste delivered to receiving facility by water? __Yes __No
        2. Does transporter carry a shipping paper with the waste containing all information required on the manifest (excluding EPA I.D. numbers, generator certification, and signatures)? __Yes __No
        3. Does transporter obtain delivery date and hand-written signature of owner/operator of designated facility on manifest or shipping paper? __Yes __No
        4. Does transporter retain copies of shipping papers or manifests, in accordance with §263.22? __Yes __No

(continued)

EXHIBIT IV-5 (continued)

h. Is transporter a rail transporter? __Yes __No

1. If yes, when accepting waste from a nonrail transporter, does rail transporter sign and date manifest acknowledging acceptance of waste? __Yes __No
2. Does rail transporter return a signed copy of manifest to nonrail transporter? __Yes __No
3. Does rail transporter forward manifest copies to:

   a. The next nonrail transporter? __Yes __No
   b. Designated receiving facility (if reached by rail)? __Yes __No
   c. The last rail transporter designated to handle the waste in the U.S.? __Yes __No

4. Does rail transporter retain a copy of manifest? __Yes __No
5. Does rail transporter ensure that a shipping paper accompanies the hazardous waste and contains all information required on manifest (excluding EPA I.D., generator certification, and signatures)? __Yes __No
6. Does rail transporter obtain delivery date and handwritten signature of owner/operator of designated facility or the next nonrail transporter on manifest? __Yes __No
7. Does rail transporter retain a copy of the manifest or signed shipping paper? __Yes __No

i. Does transporter transport waste outside of the U.S.? __Yes __No

1. If yes, does the transporter:

   a. Indicate on manifests the date that shipment left the U.S.? __Yes __No
   b. Sign manifest and retain one copy? __Yes __No
   c. Return a signed copy of manifest to generator? __Yes __No

Section D - Compliance With the Manifest

1. Does transporter deliver entire shipment of hazardous waste to:

   a. Designated facility listed on manifest? __Yes __No
   b. Alternate designated facility, if emergency prevents delivery to designated facility? __Yes __No
   c. Next designated transporter? __Yes __No
   d. Place outside U.S. designated by generator? __Yes __No
   e. If no, does transporter contact generator for further directions, and then revise manifest accordingly? __Yes __No

(continued)

EXHIBIT IV-5 (continued)

Section E - Recordkeeping

1. Does transporter keep a copy of manifest signed by generator, himself, and next designated transporter for 3 years? __Yes __No

2. Does water (bulk shipment) transporter retain copy of shipping paper for each shipment delivered by water? __Yes __No

3. Does initial rail transporter keep a copy of manifest and/or shipping paper? __Yes __No

4. Does transporter shipping waste outside of the U.S. keep for 3 years copy indicating that waste was shipped? __Yes __No

EXHIBIT IV-6

CONTAINERS CHECKLIST

Section A - Use and Management

1. Are containers in good condition? __Yes __No

Section B - Compatibility of Waste With Container

1. Is container made of a material that will not react with the waste which it stores? __Yes __No

Section C - Management of Containers

1. Is container always closed while holding hazardous waste? __Yes __No

2. Is container handled so that it will not be opened, handled, or stored in a manner which may rupture it or cause it to leak? __Yes __No

Section D - Inspections

1. Does owner/operator inspect containers at least weekly for leaks and deterioration? __Yes __No

Section E - Containment (Part 264)

1. Do container storage areas have a containment system? __Yes __No

Section F - Ignitable and Reactive Waste

1. Are containers holding ignitable and reactive waste located at least 15 m (50 ft) from facility property lines? __Yes __No

Section G - Incompatible Waste

1. Are incompatible wastes or materials placed in the same containers? __Yes __No

2. Are hazardous wastes placed in washed, clean containers when they previously held incompatible waste? __Yes __No

(continued)

EXHIBIT IV-6 (continued)

3. Are incompatible hazardous wastes separated from each other by a berm, dike, wall, or other device? __Yes __No

Section H - Closure (Part 264)

1. At closure, were all hazardous wastes and associated residues removed from the containment system? __Yes __No

EXHIBIT IV-7

SURFACE IMPOUNDMENTS CHECKLIST

Section A - Design Requirements

1. Does facility operate one or more surface impoundments? ___Yes ___No

   a. If yes, has owner/operator installed two or more liners and a leachate collection system for any new units, replacement of any existing units, or lateral expansion of units? ___Yes ___No

   b. Is owner/operator exempt from double-liner leachate collection system requirements because Regional Administrator has determined that impoundment's design will prevent the migration of hazardous constituents? ___Yes ___No

   c. Did owner/operator notify Regional Administrator 60 days prior to receiving waste (Part 265)? ___Yes ___No

   d. If impoundment does not have a double liner, is it exempt due to one of the following reasons? ___Yes ___No

      1. Monofill contains only wastes from a foundry furnace emission controls or metal casting molding sand.
      2. Monofill has at least one liner for which there is no evidence of leaking.
      3. Monofill is located, designed, and operated to ensure that no migration of constituents into ground or surface water occurs.

   e. Does owner/operator take measures to prevent overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error (Part 264)? ___Yes ___No

   f. Is impoundment surrounded by dikes (Part 264)? ___Yes ___No

Section B - Operating Requirements

1. Does owner/operator maintain at least 60 cm (2 ft) of freeboard (Part 265)? ___Yes ___No

(continued)

EXHIBIT IV-7 (continued)

a. If no, does owner/operator have certification by a qualified engineer? __Yes __No

Section C - Containment System

1. Do all earthen dikes have a protective cover (e.g., grass, gravel) to minimize erosion? __Yes __No

Section D - Waste Analysis and Trial Tests

1. Are wastes treated in the surface impoundment? (if yes, explain on a narrative sheet) __Yes __No

2. Has the owner/operator chemically treated a waste (or planning to) which is substantially different than previously treated wastes? __Yes __No

3. Has the owner/operator chemically treated a waste (or planning to) using a process that is substantially different from that previously used? __Yes __No

4. If yes to 2 or 3 above, have waste analyses and trial treatment tests been conducted? __Yes __No

    a. If not, does owner/operator have written documentation on similar treatment of similar wastes? __Yes __No

    __Yes __No

Section E - Inspections

1. Does owner/operator check freeboard level daily? __Yes __No

2. Are the surface impoundment, dikes, and surrounding vegetation inspected weekly for deterioration of failures? __Yes __No

3. If regulated under Part 264, does owner/operator:

    a. Inspect liners for imperfections (tears and punctures for synthetic liners and cracks, root holes, etc., for soil-based liners) during construction and installation? __Yes __No

    b. Inspect the operating impoundment weekly and after storms to detect evidence of deterioration, malfunction, and overtopping? __Yes __No

    c. Have certification that the dike will withstand stresses from the amount and type of waste to be held and will not fail due to cleaning? __Yes __No

EXHIBIT IV-7 (continued)

Section F - Emergency Repairs, Contingency Plans (part 264)

1. Does facility have a contingency plan? __Yes __No
   - a. If yes, does plan stipulate that impoundment he removed from service under the following conditions:
     1. Sudden drop in liquid level? __Yes __No
     2. Leaking dike? __Yes __No
   - b. Does plan detail the steps to be followed when removing impoundment from service, including:
     1. Shutting off flow into impoundment? __Yes __No
     2. Containing any surface leakage? __Yes __No
     3. Stopping the leak? __Yes __No
     4. Notifying Regional Administrator of problems in writing if leaks cannot be contained? __Yes __No
   - c. If impoundment was removed from service, did owner/operator take the necessary precautions to rectify problems before restoring impoundment to service? __Yes __No
   - d. If impoundment was removed from service and was not restored to service, was impoundment closed in accordance with an approved closure plan? __Yes __No

Section G - Closure and Post-Closure

1. Is a closure plan retained at the facility? __Yes __No
2. At closure, did owner/operator:
   - a. Remove standing liquids (Part 265)? __Yes __No
   - b. Remove waste and waste residue (Part 265)? __Yes __No
   - c. Remove liner (Part 265)? __Yes __No
   - d. Remove underlying and surrounding contaminated soil? __Yes __No

(continued)

EXHIBIT IV-7 (continued)

e. If not, did owner/operator demonstrate to Regional Administrator that the above materials were nonhazardous (Part 265)? __Yes __No

1. If no, has owner/operator closed the impoundment and provided post-closure care (Part 265)? __Yes __No

3. If regulated under Part 264, has owner/operator:

a. Removed or decontaminated waste residues, contaminated system components, subsoils, structures, and equipment, and managed them as hazardous waste? __Yes __No

b. Eliminated free liquids by removing or solidifying remaining wastes or waste residues? __Yes __No

c. Stabilized remaining wastes to a bearing capacity sufficient to support final cover? __Yes __No

d. Covered the impoundment with final cover? __Yes __No

4. Did owner/operator leave any residuals in place at closure (Part 264)? __Yes __No

5. In post-closure, does owner/operator maintain integrity of cover and ground-water monitoring system, and prevent run-on and runoff? __Yes __No

Section H - Ignitable and Reactive Wastes

1. Are ignitable or reactive wastes placed in the impoundment? __Yes __No

a. If no, do not complete b and c.

b. If yes, are they treated, rendered, or mixed before or immediately after placement in the impoundment so it no longer meets the definition of ignitable or reactive? __Yes __No

OR

c. Is the impoundment used solely for emergencies? __Yes __No

Section I - Incompatible Wastes

1. Are incompatible wastes placed in the impoundment? __Yes __No

EXHIBIT IV-7 (continued)

a. If yes, has the owner/operator taken precautions to prevent accidental ignition or reaction? __Yes __No

For facilities regulated under Part 264:

Section J - Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, F027

1. Does the impoundment contain hazardous waste numbers F020, F021, F022, F023, F026, F027? __Yes __No

   a. If yes, does the owner/operator operate the impoundment in accordance with a management plan approved by the Regional Administrator or comparable state authority? __Yes __No

EXHIBIT IV-8

WASTE PILES CHECKLIST

Section A - Design and Operating Requirements

1. Is the pile containing hazardous waste protected from wind? __Yes __No

2. Does waste pile have a liner and leachate collection system (Part 264)? __Yes __No

   a. If no, has facility proved to Regional Administrator that waste pile's design characteristics will prevent migration of hazardous constituents into ground water (Part 264)? __Yes __No

3. Is run-on diverted around active portion (Part 264)? __Yes __No

4. Is runoff collected and controlled (Part 264)? __Yes __No

5. Are collection and holding facilities emptied after storms? __Yes __No

Section B - Waste Analysis (Part 265)

1. Is a representative sample of waste from each incoming shipment analyzed before the waste is added to the pile to determine the compatibility of the wastes? __Yes __No

2. Does the analysis include a visual comparison of color or texture? __Yes __No

Section C - Containment (Part 265)

1. Is the leachate or runoff from the pile considered a hazardous waste? __Yes __No

   a. If yes, is the pile managed with the following:

      1. An impermeable base compatible with the waste? __Yes __No
      2. Run-on diversion? __Yes __No
      3. Leachate and runoff collection? __Yes __No
      4. Are collection and holding facilities periodically emptied? __Yes __No

      OR

      5. Is the pile protected from.precipitation and run-on by some other means? __Yes __No

EXHIBIT IV-8 (continued)

Section D - Monitoring and Inspection (Part 264)

1. Are liners and covers inspected for damage during construction? __Yes __No

2. Are waste piles inspected weekly for deterioration, run-on and runoff controls, wind dispersal control, and proper function of leachate collection system? __Yes __No

Section E - Ignitable or Reactive Wastes

1. Are ignitable or reactive wastes placed in the pile? __Yes __No

   a. If yes, does the addition of the waste result in the waste or mixture no longer meeting the definition? (Use narrative explanation sheet to describe procedure.) __Yes __No

   OR

   b. Is the waste protected from sources of ignition or reaction? __Yes __No

      1. If yes, use narrative explanation sheet to describe separation and confinement procedures.
      2. If no, use narrative explanation sheet to describe sources of ignition or reaction.

Section F - Incompatible Wastes

1. Are incompatible wastes placed together in the pile? __Yes __No

2. Are incompatible wastes separated from each other by a dike, berm, or wall? __Yes __No

3. Is there evidence of fire, explosion, gaseous emissions, leaching, or other discharge? (Use narrative explanation sheet.) __Yes __No

Section G - Closure and Post-Closure

1. Is a closure plan retained at the facility? __Yes __No

(continued)

EXHIBIT IV-8 (continued)

2. At closure, were all waste residues, contaminated system components, contaminated subsoils, and contaminated structures and equipment removed or decontaminated? __Yes __No

3. Were all contaminated subsoils removed from the site? __Yes __No

    a. If no, did owner/operator close the facility and perform closure and post-closure care in accordance with §264.310 and 265.310? __Yes __No

4. Is a plan for complying with No. 2 above included in closure plan? __Yes __No

5. Is a contingency plan for complying with No. 3a above included in the plan? __Yes __No

6. Is a contingency post-closure plan included? __Yes __No

7. Are cost estimates included in closure plan? __Yes __No

Section H - Requirements for Wastes F020, F021, F022, F023, F026, and F027

1. Does facility place these F wastes in a waste pile? __Yes __No

    a. If yes, does facility have an approved management plan for these wastes? __Yes __No

EXHIBIT IV-9

LAND TREATMENT CHECKLIST

Section A - Treatment Program (Part 264)

1. Does facility follow an approved land treatment program? __Yes __No

Section B - Treatment Demonstration (Part 264)

1. Has owner/operator demonstrated to Regional Administrator that hazardous wastes used in the program are completely degraded, transformed, or immobilized? __Yes __No

Section C - Operating Requirements

1. Is run-on diverted away from the land treatment facility? __Yes __No
2. Is runoff from the land treatment facility collected? __Yes __No
3. Are holding facilities emptied after storms? __Yes __No
4. Is the runoff analyzed to see if it is a hazardous waste? __Yes __No
5. Is facility managed to control dispersal? __Yes __No
6. Is unit inspected weekly (Part 264)? __Yes __No

Section D - Waste Analysis (Part 265)

1. If the runoff is considered hazardous, how is it handled? (Use narrative explanation sheet.)

2. If it is not a hazardous waste, is it discharged through a point source to surface waters? __Yes __No

   a. If yes, list NPDES Permit No. ______________________________

3. What hazardous wastes are treated at the land treatment facility?

Subpart D Listed Wastes	Characteristic Wastes (EP Toxicity)

(continued)

EXHIBIT IV-9 (continued)

a. For these listed wastes, were analyses done to determine the concentrations of these constituents which caused the waste to be listed? __Yes __No

   1. If yes, what are these concentrations? (Use narrative explanation sheet.)

b. For those characteristic wastes (EP) toxicity, what are the concentrations of the following:

	Concentration, mg/liter	Waste
Arsenic		
Barium		
Cadmium		
Chromium		
Lead		
Mercury		
Selenium		
Silver		
Endrin		
Lindane		
Methoxychlor		
Toxphene		
2,4-D		
2,4,5-TP silvex		

Section E - Food-Chain Crops

1. Are food-chain crops grown? __Yes __No

   a. If yes, what are the concentrations of the following in the soil and vegetation:

	Soil concentration, mg/liter	Vegetation concentration, mg/liter
Arsenic		
Cadmium		
Lead		
Mercury		

2. Did the facility notify Regional Administrator that he is growing food-chain crops (Part 265)? __Yes __No

(continued)

EXHIBIT IV-9 (continued)

3. Has owner/operator demonstrated that no harm is done to health or environment (Part 264)? __Yes __No

4. Has owner/operator demonstrated that any arsenic, lead, mercury, or other constituents under 265.273(b) will not be transported to crops (Part 265)? __Yes __No

3. Does the facility treat waste that contains cadmium? __Yes __No

    a. If no, do not fill out b.

    b. If yes, was the pH of the soil and waste mixture 6.5 or greater at the time of each waste application? __Yes __No

        1. If the pH was less than 6.5, did the waste contain cadmium concentrations of 2 mg/kg or less? __Yes __No

Section F - Unsaturated-Zone Monitoring

1. Is an unsaturated-zone monitoring plan kept at the facility (Part 265)? __Yes __No

2. Does owner/operator perform the following:

    a. Soil monitoring? __Yes __No
    b. Soil-pore water monitoring? __Yes __No
    c. Sample depths below waste incorporation? __Yes __No
    d. Background values (Part 264)? __Yes __No
    e. Consistent sampling and analysis procedures? __Yes __No
    f. Determination of significant changes? __Yes __No
    g. Notification when change is found? __Yes __No

3. Does plan include the following (Part 265):

    a. Depth of sampling? __Yes __No
    b. Number of samples? __Yes __No
    c. Frequency and timing of samples? __Yes __No

4. Does owner/operator analyze for hazardous waste constituents? __Yes __No

(continued)

EXHIBIT IV-9 (continued)

Section G - Recordkeeping

1. Are records kept at the facility of:

    a. Application dates? __Yes __No
    b. Application rates? __Yes __No
    c. Quantities? __Yes __No
    d. Waste location? __Yes __No

Section H - Closure and Post-Closure

1. Is a copy of the closure/post-closure plan kept at the facility? __Yes __No

2. Does closure plan address the following (Part 265):

    a. Control of the migration of hazardous waste and hazardous waste constituents from the treated area into the ground water? __Yes __No

    b. Control of the release of contaminated runoff from the facility into surface water? __Yes __No

    c. Control of the release of airborne particulate contaminants caused by wind erosion? __Yes __No

    d. Compliance with §265.276 concerning the growth of food-chain crops? __Yes __No

3. Does owner/operator ensure the following during closure (Part 764):

    a. Maintenance of monitoring systems on unsaturated zone? __Yes __No

    b. Maintenance of run-on controls? __Yes __No

    c. Maintenance of runoff management system? __Yes __No

    d. Wind dispersal control? __Yes __No

    e. Attempt to maximize degradation, transformation, and immobilization of hazardous waste constituents? __Yes __No

    f. Continue to comply with any prohibitions or conditions concerning growth of food-chain crops? __Yes __No

(continued)

EXHIBIT IV-9 (continued)

g. Continue unsaturated-zone monitoring in compliance with 264.278? __Yes __No

h. Establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone? __Yes __No

4. During post-closure care, does owner/operator:

a. Continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone? __Yes __No

b. Maintain a vegetative cover over closed portions of the facility? __Yes __No

c. Maintain the run-on control system required under §264.273(c)? __Yes __No

d. Maintain the runoff management system required under §264.273(d)? __Yes __No

e. Control wind dispersal of hazardous waste if required under §264.273(f)? __Yes __No

f. Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under §264.276? __Yes __No

g. Continue unsaturated-zone monitoring in compliance with §264.278? __Yes __No

5. Does facility have certification that closure was performed according to plan? __Yes __No

a. Was certification submitted to Regional Administrator (Part 265)? __Yes __No

6. Does owner/operator continue the following during post-closure (Part 265)?

a. Soil-pore monitoring by collecting and analyzing samples as specified in the plan? __Yes __No

(continued)

EXHIBIT IV-9 (continued)

b. Restrict access? __Yes __No

c. Assure that growth of food-chain crops is in compliance? __Yes __No

d. Control wind dispersal? __Yes __No

Section I - Ignitable or Reactive Wastes

1. Are ignitable or reactive wastes placed in the facility? __Yes __No

   a. If yes, are the wastes treated, rendered, or mixed before or after placement in the landfill so it is no longer reactive or ignitable? __Yes __No

   b. Describe or attach a copy of treatment.

Section J - Incompatible Wastes

1. Are incompatible wastes placed in the facility? __Yes __No

   a. Are the incompatible wastes placed in different locations in the facility? __Yes __No

EXHIBIT IV-10

LANDFILLS CHECKLIST

Section A - Design Requirements

1. Does landfill have two or more liners and a leachate collection system between the liners? __Yes __No
2. Did owner/operator notify Regional Administrator 60 days prior to receiving waste (Part 265)? __Yes __No
3. If landfill does not have two liners and a leachate collection system, did owner/operator adequately demonstrate to Regional Administrator that alternate design and operation prevents migration of hazardous constituents? __Yes __No
4. If no double liner exists, does landfill fall into one of the following exemption categories:
    a. Monofill only holds wastes from foundry furnace emission controls or metal casting molding sand? __Yes __No
    b. Monofill has at least one liner and there is no evidence that liner is leaking? __Yes __No
    c. Owner/operator demonstrates that monofill is located, designed, and operated to prevent migration of hazardous constituents? __Yes __No
5. If landfill does not have two liners and a leachate collection system, does it have at least one liner for all existing portions (Part 264)? __Yes __No
    a. If yes, does this liner provide for the following:
        1. To prevent migration of wastes out of landfill to subsurface soil, ground water, and surface water (Part 264)? __Yes __No
        2. A leachate collection and removal system immediately above the liner constructed to be chemically resistant to the waste and strong enough not to collapse under pressure (Part 264)? __Yes __No
6. If owner/operator does not comply with No. 5 above, is he exempt after demonstrating to Regional Administrator that alternate design and operation prevents migration of hazardous constituents (Part 264)? __Yes __No

(continued)

EXHIBIT IV-10 (continued)

Section B - Operating Requirements

1. Are run-on controls preventing flow onto the active portion of the landfill? __Yes __No

2. Is runoff collected and controlled? __Yes __No
3. Are collection and holding facilities emptied after storms? __Yes __No
4. Is the landfill managed so that wind dispersal is controlled? __Yes __No

Section C - Monitoring and Inspection (Part 264)

1. Are liners inspected for defects during and after construction? __Yes __No

2. Are landfills inspected weekly and after storms for defects? __Yes __No

Section D - Surveying and Recordkeeping

1. Does owner/operator retain records at the facility? __Yes __No

    a. If yes, are the following maintained:

        1. On map, exact location and dimensions, including depths, of each cell? __Yes __No
        2. Contents of each cell and approximate location of each hazardous waste type within the cell? __Yes __No

Section E - Closure and Post-Closure

1. Is a closure plan kept on site? __Yes __No

    a. If yes, does cover provide for the following:

        1. Minimizing migration of liquids? __Yes __No
        2. Minimum maintenance? __Yes __No
        3. Promote drainage; minimize erosion? __Yes __No
        4. Accommodate settling and subsidence? __Yes __No
        5. Less permeable than bottom liner or natural subsoils? __Yes __No

    b. After final closure, does owner/operator provide for the following:

(continued)

EXHIBIT IV-10 (continued)

1. Maintain final cover? __Yes __No
2. Continue to operate leachate collection and removal system until leachate is no longer collected? __Yes __No
3. Maintain ground-water monitoring? __Yes __No
4. Prevent run-on and runoff from eroding and damaging cover? __Yes __No
5. Protect and maintain surveyed bench marks? __Yes __No

Section F - Ignitable and Reactive Waste

1. Are ignitable or reactive wastes placed in the landfill? __Yes __No
    a. If yes, is waste treated, rendered, or mixed before or immediately after placement so that it is no longer ignitable or reactive? __Yes __No
2. Are ignitable wastes in containers placed in landfill? __Yes __No
    a. If yes, attach a narrative describing how these wastes are handled to prevent ignition or reaction?

Section G - Incompatible Wastes

1. Does owner/operator place incompatible wastes in landfill? __Yes __No

Section H - Bulk and Containerized Liquids

1. Does landfill receive any bulk or containerized liquid hazardous waste? __Yes __No
    a. If yes, have they been added to landfill since May 8, 1985? __Yes __No
2. Does landfill receive containers of free liquids? __Yes __No
    a. If yes, is at least one of the following conditions met:
        1. Have free-standing liquids been removed by decanting or other methods; or have they been mixed with absorbent or solidified? __Yes __No
        2. Are containers ampules? __Yes __No
        3. Is container designed to hold free liquids? __Yes __No
        4. Is container a lab pack? __Yes __No

(continued)

EXHIBIT IV-10 (continued)

3. Have containers holding liquids that are not hazardous wastes been placed in the landfill since November 8, 1985? __Yes __No
    a. If, yes, is one of the following conditions met:
        1. Was it the only reasonable alternative to place it in a landfill or unlined impoundment? __Yes __No
        2. Did placement not present a risk to contaminating any underground source of drinking water? __Yes __No

Section I - Container Requirements

1. Are containers placed in the landfill? __Yes __No
    a. If yes, are they either:
        1. 90 percent full? __Yes __No
        2. Crushed, shredded, or similarly reduced in volume? __Yes __No

Section J - Overpacked Drums

1. Are small containers of hazardous waste placed in landfill? __Yes __No
    a. If yes, are the following requirements met?
        1. Waste packaged in non-leaking container and tightly sealed? __Yes __No
    b. Containers not overpacked according to DOT regulations? __Yes __No
    c. Absorbent material does not react with waste? __Yes __No
    d. Incompatible wastes not placed outside the same container? __Yes __No
    e. Reactive waste treated or rendered nonactive before packaging? __Yes __No

Section K - F020, F021, F022, F023, F026, and F027 Wastes (Part 264 only)

1. Are these wastes placed in landfill? __Yes __No
    a. If yes, did owner/operator receive permission from Regional Administrator to do so? __Yes __No
    b. Is documentation of "a" above on file at facility? __Yes __No

EXHIBIT IV-11

INCINERATORS CHECKLIST

Section A - Waste Analysis (Part 265 only)

1. Does owner/operator analyze all wastes he has not previously burned to enable him to establish steady-state operating conditions? __Yes __No

   a. If yes, does analysis include:

      1. Determination of heating value? __Yes __No
      2. Determination of halogen and sulfur content? __Yes __No
      3. Concentrations of lead and mercury? __Yes __No

   b. If lead and mercury are not included, has owner/operator proven this fact to Regional Administrator? __Yes __No

2. Does owner/operator perform a waste feed analysis in the Part B application? __Yes __No

3. Are waste analyses performed throughout normal operations? __Yes __No

Section B - Principal Organic Hazardous Constituents (POHC's) (Part 264)

1. Does owner/operator use POHC's in accordance with facility's permit specifications? __Yes __No

Section C - Performance Standards (Part 264)

1. Does incinerator burn at a destruction and removal efficiency (DRE) of at least 99.9999 percent for each POHC? __Yes __No

2. Do stack emissions of more than 1.8 kg/h of HCl exceed both 1.8 kg/h and 1 percent HCl in the stack? __Yes __No

3. Does incinerator emit particulates greater than 180 mg/dry standard cubic meter? __Yes __No

Section D - Permits

1. Are wastes burned although no permit is issued (Part 264? __Yes __No

(continued)

EXHIBIT IV-11 (continued)

a. If yes, are wastes burned in a trial burn (Part 264)? __Yes __No

OR

b. Does owner/operator have an exemption due to 264.340 (Part 264) __Yes __No

c. Does owner/operator burn hazardous waste during startup or shutdown if not allowed to do so in permit (Part 264)? __Yes __No

d. Is waste feed cut off when operating requirements are not met (Part 264)? __Yes __No

Section E - Operating Requirements

1. Does incinerator operate per permit requirements (Part 264)? __Yes __No

2. Does owner/operator feed hazardous waste into incinerator when it is not at steady state (Part 265)? __Yes __No

Section F - Monitoring and Inspections

1. Does owner/operator conduct, at a minimum, the following:

   a. Existing instruments relating to combustion or emission control every 15 minutes (Part 265)? __Yes __No

   b. Is complete incinerator and associated equipment inspected daily for leaks, spills, and emissions, and are all emergency shutdown controls and system alarms checked (Part 265)? __Yes __No

   c. Are combustion temperature, waste feed rate, and combustion gas velocity all checked continuously (Part 264)? __Yes __No

   d. Is CO monitored continuously (Part 264)? __Yes __No

   e. Are waste and exhaust emissions sampled and analyzed (Part 264)? __Yes __No

   f. Is incinerator usually checked daily for leaks and spills (Part 264)? __Yes __No

(continued)

EXHIBIT IV-11 (continued)

g. Are emergency feed cutoff and alarms inspected weekly (Part 264)? __Yes __No

h. Are monitoring and inspection data recorded and placed in operating log (Part 264)? __Yes __No

Section G - Closure

1. Is a closure plan kept on site? __Yes __No

2. At closure, has owner/operator removed all hazardous waste residues from incinerator? __Yes __No

Section H - Interim Status (Part 265)

1. Does owner/operator burn F020, F021, F022, F023, F026, and/or F027 wastes? __Yes __No

   a. If yes, does owner/operator possess certification from Assistant Administrator for Solid Waste and Emergency Response to do so? __Yes __No

EXHIBIT IV-12

THERMAL TREATMENT CHECKLIST
(PART 264 only)

NOTE: Applies to thermal treatment of hazardous waste in devices other than incinerators.

Section A - Operating Requirements

1. Is the process a noncontinuous (batch) process? __Yes __No

    a. If no, is the process operating at steady-state conditions (including temperature) before adding hazardous waste? __Yes __No

    b. Is a waste analysis documented in the operating record that includes:

        1. Heating value? __Yes __No
        2. Halogen content? __Yes __No
        3. Sulfur content? __Yes __No
        4. Concentration of lead? __Yes __No
        5. Concentration of mercury? __Yes __No

NOTE: 4 and 5 not required if facility has written documented data that show the elements are not present.

2. Does the owner/operator monitor the following when thermally treating hazardous wastes:

    a. At least every 15 minutes, existing instruments which relate to the temperature and emission control:

        1. Waste feed? __Yes __No
        2. Auxiliary fuel feed? __Yes __No
        3. Treatment process temperature? __Yes __No
        4. Relevant process flow? __Yes __No
        5. Relevant level controls? __Yes __No

    b. Stack plume (emissions) at least hourly:

        1. Color (normal)? __Yes __No
        2. Opacity? __Yes __No

(continued)

EXHIBIT IV-12 (continued)

c. Thermal treatment process equipment at least daily:

   1. Pumps, valves, conveyors, pipes, etc., for leaks, spills, and fugitive emissions? __Yes __No
   2. Emergency shutdown controls? __Yes __No
   3. System alarms __Yes __No

d. Construction materials of the treatment process or equipment at least weekly to detect corrosion or leaking of fixtures or seams? __Yes __No

e. Construction materials of the area immediately surrounding discharge confinement structures at least weekly? __Yes __No

Section B - Closure

1. Is a closure plan maintained at the facility? __Yes __No

Section C - Open Burning

1. Is there evidence of any open burning of hazardous waste? (Use narrative explanation sheet) __Yes __No

2. Is open burning or detonation of waste explosives conducted? __Yes __No

   a. If yes, is the detonation performed in accordance with the following table?

Pounds of waste explosives or propellants	Minimum distance from open burning detonation to the property or others
0-100	204 m (670 ft)
101-1,000	380 m (1250 ft)
1,001-10,000	530 m (1730 ft)
10,001-30,000	690 m (2260 ft)

Section D - Particulate Hazardous Waste

1. Does owner/operator burn F020, F021, F022, F023, F026, and/or F027 wastes? __Yes __No

   a. If yes, does owner/operator have documented permission from Assistant Administrator for Solid Waste and Emergency Response to do so? __Yes __No

EXHIBIT IV-12 (continued)

Section E - Closure

Does the facility maintain a closure plan? __Yes __No

Section F - Ignitable or Reactive Waste

1. Are ignitable or reactive wastes placed in the treatment process? __Yes __No

   a. If yes, is the waste treated, rendered, or mixed before or immediately after being placed in the treatment process so it no longer meets the definition of ignitable or reactive? __Yes __No

      Describe or attach a copy of the treatment.

Section G - Incompatible Wastes

1. Are incompatible wastes placed in the same treatment process or equipment? __Yes __No

2. Are hazardous wastes placed in washed equipment if equipment previously held incompatible waste? __Yes __No

EXHIBIT IV-13

GROUND-WATER MONITORING CHECKLIST

Section A - Monitoring System

1. Does the facility have a ground-water monitoring system in operation? __Yes __No
    a. If yes, does the system consist of:
        1. Minimally one upgradient monitoring well (Part 265)? __Yes __No
        2. Minimally three downgradient monitoring wells (Part 265)? __Yes __No
    b. Are monitoring wells cased so that the integrity of the boreholes is maintained (Part 265)? __Yes __No
    c. Is a compliance monitoring system installed whenever hazardous waste constituents are detected at the compliance point (Part 264)? __Yes __No
    d. Is a corrective-action program initiated whenever the ground-water protection standard is exceeded (Part 264)? __Yes __No
    e. Is a detection monitoring program instituted in all other cases (Part 264)? __Yes __No
2. Does facility have a monitoring and response program (Part 264)? __Yes __No
    a. If yes, is a compliance monitoring system instituted whenever hazardous constituents are detected at the compliance point (Part 264)? __Yes __No
    b. Whenever the ground-water protection standard is exceeded, does facility institute a corrective-action program (Part 264)? __Yes __No
    c. In all other cases, does facility institute a detection monitoring program (Part 264)? __Yes __No

Section B - Sampling and Analysis (Part 265 only)

1. Does the facility obtain and analyze samples from the ground-water monitoring system? __Yes __No

(continued)

EXHIBIT IV-13 (continued)

1. Has facility developed and followed a ground-water sampling and analysis plan? __Yes __No

   a. If yes, does this plan include procedures and techniques for:

      1. Sample collection? __Yes __No
      2. Sample preservation? __Yes __No
      3. Analytical procedures? __Yes __No
      4. Chain-of-custody control? __Yes __No

   b. Does the facility determine the concentration or value of the following parameters in ground-water samples?

      1. Parameters characterizing the suitability of the ground water as a drinking water supply, as specified in §265, Appendix 3? __Yes __No
      2. Parameters establishing ground-water quality (chloride, iron, manganese, phenols, sodium, sulfate)? __Yes __No
      3. Parameters used as indicators of ground-water contamination (pH, specific conductance, total organic carbon, total organic halogen)? __Yes __No

   c. Has the owner/operator established initial background concentrations or values of all parameters specified above at least on a quarterly basis? __Yes __No

   d. Has owner/operator obtained at least four replicate measurements for each sample, and has he determined the initial background arithmetic mean and variance? __Yes __No

   e. After the first year, does owner/operator sample and analyze with the following frequencies: __Yes __No

      1. Samples collected to establish background quality (from above)? __Yes __No
      2. Samples collected to indicate contamination (from above)? __Yes __No
      3. Elevation of ground-water surface at each monitoring well at each sampling event? __Yes __No

Section C - Preparation, Evaluation, and Response (Part 265 only)

1. Did owner/operator prepare an outline of a ground-water quality assessment program? __Yes __No

(continued)

EXHIBIT IV-13 (continued)

a. If yes, did program determine the following:

1. Whether hazardous waste or hazardous waste constituents have entered the ground water? __Yes __No
2. Rate and extent of hazardous waste or hazardous waste constituent migration? __Yes __No
3. Concentrations of hazardous waste or hazardous waste constituents in ground water? __Yes __No

b. For each well, has owner/operator calculated the arithmetic mean and variance, based on four replicate measurements for each sample, and compared the results with initial background mean? __Yes __No

c. Has owner/operator submitted information documenting any significant increase in comparisons for upgradient wells (or decrease in pH)? __Yes __No

d. If the comparisons for downgradient wells show a significant increase (or pH decrease), has the owner/operator obtained additional ground-water samples from those downgradient wells in which a significant decrease was detected? (Samples must be split in two, and analyses must be obtained of all additional samples to determine whether the significant difference was a result of lab error? __Yes __No

1. If analyses (described above) were performed, and confirmed the significant increase (or pH decrease), did owner/operator notify Regional Administrator within 7 days? __Yes __No

2. If analyses confirmed significant increase (or pH decrease), did owner/operator submit to the Regional Administrator within 14 days after notification (discussed above) a certified ground-water quality assessment program? __Yes __No

    a. If yes, does plan include the following:

        1. Number, location, and depth of wells? __Yes __No
        2. Sampling and analytical methods for those hazardous wastes and hazardous waste constituents at the facility? __Yes __No
        3. Evaluation procedures, including any use of previously gathered ground-water quality information? __Yes __No
        4. Schedule of implementation? __Yes __No

(continued)

EXHIBIT IV-13 (continued)

3. Aid owner/operator implement the ground-water qualify-assessment program and, at a minimum, did he determine the following: __Yes __No
    a. Rate and extent or migration of the hazardous waste constituents in the ground water? __Yes __No
    b. Concentrations of the hazardous waste in the ground water? __Yes __No
4. Did owner/operator submit a report to Regional Administrator containing the requests of the assessment outlined in No. 3 above within 15 days? __Yes __No
5. Did owner/operator notify Regional Administrator of reinstatement of indicator evaluation program upon finding that no hazardous waste or hazardous waste constituents had entered the ground water? __Yes __No
6. If owner/operator determined that hazardous waste or hazardous waste constituents entered the ground water, did he either continue to make the determinations listed in No. 3 above on a quarterly basis until final closure or ground-water quality-assessment plan was implemented prior to post-closure care, or cease to make determinations required in No. 3 above if ground-water quality-assessment plan was implemented during post-closure? __Yes __No
7. If any ground-water quality-assessment program is implemented to satisfy No. 3 above prior to final closure, has owner/operator completed program and reported to Regional Administrator, as outlined in No. 4 above? __Yes __No
8. If owner/operator does not monitor at least annually to satisfy No. 3 above, does owner/operator evaluate data on ground-water elevation obtained under No. 2e in Section B above to determine whether the requirements for locating monitoring wells are satisfied? __Yes __No
    a. If evaluation shows that the requirements for monitoring wells are not satisfied, has owner/operator modified the number, location, or depth of the monitoring wells to bring the system into compliance? __Yes __No

(continued)

EXHIBIT IV-13 (continued)

Section D - Recordkeeping and Reporting (Part 265 only)

1. Unless owner/operator is monitoring to satisfy the requirements of §265.93(d)(4), does owner/operator:

   a. Keep records of the analyses required in §265.92(c) and (d), ground-water surface elevations required in 265.93(b) throughout the active life of the facility and throughout post-closure? __Yes __No

   b. Report the following information to the Regional Administrator:

      1. Within 15 days of analysis for each quarterly sampling event, does owner/operator submit results of background concentrations? __Yes __No
      2. Does owner/operator inform Regional Administrator about any parameters that exceed maximum contaminant levels listed in Appendix III? __Yes __No
      3. (Annually) does owner/operator report concentrations or values of parameters listed in §265.92(b)(3) for each well, including required evaluations for these parameters under §265.93(b)? __Yes __No

         a. Does owner/operator also identify differences from initial background concentrations found in the upgradient wells no later than March 1 following each calendar year? __Yes __No

2. Does owner/operator submit results of the ground-water surface elevations under §265.93(f), along with a description of the response, if needed? __Yes __No

3. If ground water is monitored to satisfy requirements of §265.93(d)(4), did owner/operator do the following:

   a. Keep records of analyses and evaluations specified in the plan throughout active life and post-closure? __Yes __No

   b. (Annually, until final closure) submit to the Regional Administrator a report containing the results of the ground-water quality assessment program, including the calculated rate of migration of hazardous waste or hazardous waste constituents by March 1? __Yes __No

(continued)

EXHIBIT IV-13 (continued)

Section E - General Requirements (Part 264 only)

1. Does facility comply with the following requirements?

   a. Are sufficient wells installed at appropriate locations and depths? __Yes __No

   b. Have sampling and analysis techniques been consistent? __Yes __No
   c. Have ground-water elevation data been recorded? __Yes __No
   d. Have background concentrations been determined? __Yes __No

2. If ground water is monitored to satisfy requirements of §265.93(d)(4), owner/operator must:

   a. Keep records of the analyses and evaluations specified in the plan throughout the facility's active life, and, for disposal facilities, throughout post-closure. __Yes __No

   b. Report the following ground-water monitoring information:

      1. During the first year when initial background concentrations are being determined, did owner/operator submit values within 15 days after completing analysis? __Yes __No
      2. If yes, did owner/operator also submit an identification of any parameters whose concentrations exceed maximum levels in Appendix III? __Yes __No
      3. (Annually) did owner/operator report concentrations or values of the parameters listed in §265.92(b)(2) for each well, along with required evaluations for these parameters under §265.93(b)? __Yes __No
      4. Did owner/operator also separately identify any significant differences from initial background concentrations for upgradient wells? __Yes __No
      5. Did owner/operator report on the results of ground-water surface elevations (and a description of the results if necessary) by March 1 of the following year? __Yes __No

Section F - Detection Monitoring Program (Part 264 only)

1. Has owner/operator established detection monitoring system to provide reliable indications for detection releases? __Yes __No

(continued)

EXHIBIT IV-13

a. If yes, are the following components included in the system:

1. Background values? __Yes __No
2. Determination of ground-water flow rate? __Yes __No
3. Determination of ground-water compliance point semiannually? __Yes __No
4. Determination of statistically significant increases over background concentrations? __Yes __No
5. Notification to Regional Administrator if there was a statistically significant increase? __Yes __No

Section G - Compliance Monitoring Program (Part 264 only)

1. Does facility operate a compliance monitoring program? __Yes __No

    a. Does facility determine concentrations of hazardous constituents at least quarterly? __Yes __No

    b. Does facility determine ground-water flow rate and direction in uppermost aquifer annually? __Yes __No

    c. Does facility analyze samples for Appendix VIII constituents annually? __Yes __No

    d. Does facility make statistically significant increases over background values? __Yes __No

    e. If there is an increase, does facility notify Regional Administrator and submit to establish a corrective-action program? __Yes __No

Section H - Corrective-Action Program (Part 264 only)

1. Does facility follow a corrective-action program that meets the facility's permit requirements? __Yes __No

*See RCRA Ground-Water Monitoring Systems (OSWER Nos., 9950.2, 9950.3, 9950.4)

WASTE INFORMATION WORKSHEET
(To be filled out for each facility waste)

WASTE NAME: ____

PROCESS GENERATING THE WASTE: ______________________________

____

____

HOW HAS FACILITY CLASSIFIED THE WASTE ?
HAZARDOUS__________(if so, list waste code) NON-HAZARDOUS__________
HOW HAS FACILITY MADE THIS DETERMINATION ?
TESTING______________PROCESS KNOWLEDGE______________

ARE AMY TEST RESULTS AVAILABLE ?
YES________(if so, look at) NO__________

WASTE GENERATION RATE:______________________________

DISPOSAL PROCEDURE:
CURRENT______________________________
PAST______________________________

HAVE MANIFESTS BEEN USED FOR OFF-SITE SHIPMENT ?
YES______(if so, look at) NO______

IS WASTE SUBJECT TO LAND DISPOSAL RESTRICTIONS UNDER 40 CFR 268 ?

____

IS WASTE SUBJECT TO EXCLUSIONS UNDER 40 CFR 261.4 ?

____

Appendix V

Health and Safety Considerations

The health and safety of inspection personnel is an important aspect of the overall inspection process that must be seriously considered prior to their entering a facility. The Occupational Safety and Health Administration (OSHA) standards for hazardous materials (Subpart H of 29 CFR Part 1910) were amended in December 1986 by the addition of a new §1910.120, which contains protection requirements for workers involved in hazardous waste operations. This interim final rule, mandated by the Superfund Amendments and Reauthorization Act (SARA) of 1986, regulates employee safety and health at hazardous waste operations and during emergency response actions. The inspector must be thoroughly familiar with the OSHA health and safety regulations to ensure compliance with those requirements that are applicable to the inspection process.

Another source of information regarding health and safety requirements with which the inspector should be familiar is U.S. EPA Order No. 1440.2, titled "Health and Safety Requirements for Employees Engaged in Field Activities". This Order establishes policy, responsibilities, and mandatory requirements for occupational health and safety training and for occupational medical monitoring of EPA employees engaged in field activities. The information and guidelines presented in the Order are applicable to all EPA organizational units having employees engaged in field activities; therefore, the RCRA inspector should be familiar with its contents.

All hazardous waste management facilities pose some degree of hazard to personnel present on site, and this hazard increases in direct proportion to the decrease in the amount and quality of information available to these personnel on facility operations and practices. Therefore, it is extremely important that the inspector understands the facility's processes and hazardous waste management practices prior to entering the facility so that he or she is aware of all the potential health and safety issues and follows the appropriate procedures during the inspection. In addition to reviewing Federal, State, and/or local files and interviewing regulatory personnel who are familiar with the facility, the inspector should also consult the Regional Safety Officer or equivalent State official, regarding potential hazards before undertaking the inspection. Even though thoroughly familiar with available information regarding a facility, the inspector still may not have all the information needed to make sound health and safety judgments;

therefore, common sense and experience must enter into determinations and decisions. The inspector should not assume that the owner/operator knows all of the safety concerns that may apply to the facility, and should not take statements made by the owner/operator concerning the safety of an activity or location at the facility at face value.

The RCRA inspector should have a working knowledge of the following health- and safety-related areas and issues:

- Potential exposure routes
- Hazard assessment
- Long-term risk
- Levels of protection
- Safety equipment (use and maintenance)
- Personal protective equipment (use and maintenance)
- Decontamination and disposal of protective clothing
- Emergency treatment.

Table V-1 presents a partial listing of guidance documents that are available on health and safety issues related to hazardous waste management. The inspector is referred to these documents for detailed information on the areas and issues identified above. In addition to this list, Appendix VI contains names and descriptions of chemical information sources, which will also be of use to the inspector.

TABLE V-1. LIST OF HEALTH AND SAFETY GUIDANCE DOCUMENTS

"Appendix M, Site Safety Plan Guidance: Draft." OSWER 9375.1-2A-C. U.S. Environmental Protection Agency. December 30, 1986. Provides information on health and safety to supplement Regional Office safety procedures.

"Chemical Engineering Preparedness Program, Interim Guidance," U.S. Environmental Protection Agency. Program Directive No. 9223.0-01A. OERR, Catalog of Program Directives. December 1986. Establishes Criteria for identifying acutely toxic chemicals.

Chemical Manufacturers Association, 1825 Connecticut Avenue, N.W., Washington, D.C. 20009. The CMA has many publications that give complete information on health and fire hazards, handling, storage, labeling, packaging, and transportation. A list of publications is available.

"Dangerous Properties of Industrial Materials," Newton Irving Sax, Reinhold Publishing Corporation, New York, 1963, Third Edition. Contains information covering more than 12,000 hazardous materials. Areas of hazard covered include radiation hazards, industrial fire protection, storage and handling of hazardous materials, respiratory protection, and personal hygiene.

"Environmental Monitoring Series: Hazardous Materials Spill Monitoring Safety Handbook and Chemical Hazard Guide Part A." EPAx8602-0151. U.S. Environmental Protection Agency. 1979. Presents information on hazards from spills of chemical compounds, exposure, prevention, protection, and first-aid measures to be followed by response personnel.

"Fire Protection Guide on Hazardous Materials," National Fire Protection Association, 60 Batterymarch Street, Boston, Massachusetts 02110. This recent publication is a complete volume on the fire, explosion, and health characteristics of many chemicals and materials. It combines five previous NFPA texts (49, 491M, 325A, 325M, and 704M).

"Guidance on Remedial Investigations Under CERCLA," U.S. Environmental Protection Agency, HWERL, OERR, OWPE. May 1985. Provides guidance on conducting remedial investigations at uncontrolled hazardous waste sites; includes detailed discussion of health and safety issues and procedures.

"Hazardous Material Handling Training Manual," NUS Corporation, Waste Management Services Group. February 1987. Guidance manual used for health and safety training of RCRA and CERCLA field personnel.

"Hazardous Waste Site Investigation Training." EPA-8512-0003. U.S. Environmental Protection Agency. 1981. Covers a 5-day training course and includes appendices on toxicology and safety and health policy.

TABLE V-1. (CONTINUED)

"Hazardous Waste Sites and Hazardous Substance Emergencies: Worker Bulletin," EPAx8610-0023. U.S. Department of Health and Human Services. 1982. Provides preliminary guidance to protect health of hazardous waste workers; joint project of EPA, NIOSH, OSHA, and U.S. Coast Guard.

Health effects assessment documents (available for a large number of chemical compounds). U.S. Environmental Protection Agency, Office of Research and Development, Environmental Criteria and Assessment Office. 1984.

"NEIC Safety Manual," U.S. Environmental Protection Agency, Office of Enforcement, National Enforcement Investigation Center, EPA-330/9-74-002-B, Denver, Colorado, February 1977. Provides general guidelines on safety for NEIC personnel; consistent with OSHA requirements.

"Occupational Safety and Health for the Federal Employee," U.S. Department of Labor, Occupational Safety and Health Administration, January 1, 1979. A booklet outlining Federal Government policy concerning occupational safety and health protection provided for Government employees.

"Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities." EPAx8603-0213. NIOSH. 1985. Provides guidance on hazards, training, medical programs, protective equipment, decontamination, air monitoring, container handling, and site emergencies.

"Occupational Safety and Health Technical Assistance and Enforcement Guidelines for Superfund," U.S. Environmental Protection Agency. Program Directive No. 9285.3-01. OERR. Catalog of Program Directives. December 1986. Provides direction for OSHA and other field staff who may be called upon to provide technical assistance or conduct enforcement activities at hazardous waste sites.

"Protecting Health and Safety at Hazardous Waste Sites: An Overview." EPAx8603-0208. U.S. Environmental Protection Agency. 1985. Summaries for health protection; details training, medical monitoring, handling waste containers, and wearing personal protective equipment.

"Quality Assurance/Field Operations Methods Manual," U.S. Environmental Protection Agency. Program Directive No. 9355.0-14. OERR. Catalog of Program Directives. December 1986. Provides Remedial Project Managers (RPM's), quality assurance officers, and States with a reference for field procedures.

"Standard Operating Safety Guide Manual," U.S. Environmental Protection Agency. Program Directive No. 9285.1-01B. OERR. Catalog of Program Directives. December 1986. Provides guidance on health and safety to complement professional judgment and experience and to supplement existing regional safety criteria.